

# Indicators

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## Introduction

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The next section of the atlas maps the geographic distribution of the population in the CNAHS region for each of the indicators under the headings of:

- demography and socioeconomic status
- income support
- health status and risk factors
- use of services

The final section provides the results of a correlation analysis, and a description of the main findings from that analysis.

Some people will use the atlas as a reference source, either going to particular maps (eg. a map of hospital admissions and a map of specialist medical practitioners), or using the index to find a particular topic (eg. families) or variable (eg. Avoidable mortality).

Others may choose to examine the correlation matrices and to then view the maps for variables for which the data are highly correlated. Or they may access the data by downloading a spreadsheet from the PHIDU web site, perhaps to re-group the SLAs to suit their own purpose, recalculating the percentages or standardised ratios to represent the new spatial groupings.

To assist users in reading the maps, the layout of the map, and how to read it, is described below.

## The map

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The area mapped is the Central Northern Adelaide Health Service Region. The major spatial unit mapped is the Statistical Local Area (SLA)<sup>2</sup>, with the three sub regions shown with a thicker line.

The darker shades show the highest percentages and ratios, generally indicating the area to have the poorest outcomes, be they socioeconomic or health-related outcomes.

The legend shows the data ranges used to indicate the spatial distribution of the characteristic being mapped.

Footnotes on the map page draw attention to particular aspects of the mapped data and the source of the data.

The map overleaf (Map A) is the map of avoidable mortality for deaths at ages 0 to 74 years. The measure mapped in this case is a standardised ratio, which shows the rate per 100,000 deaths, expresses as an index, where 100 is the State rate. Numbers above 100 show the percentage by which the rate in the SLA is 'above the level expected from the State rates'. For example, Playford - West Central has a standardised ratio of 164, showing that there were 64% more deaths at ages 0 to 74 years than would have occurred if the state-wide 'average' death rates applied in this SLA.

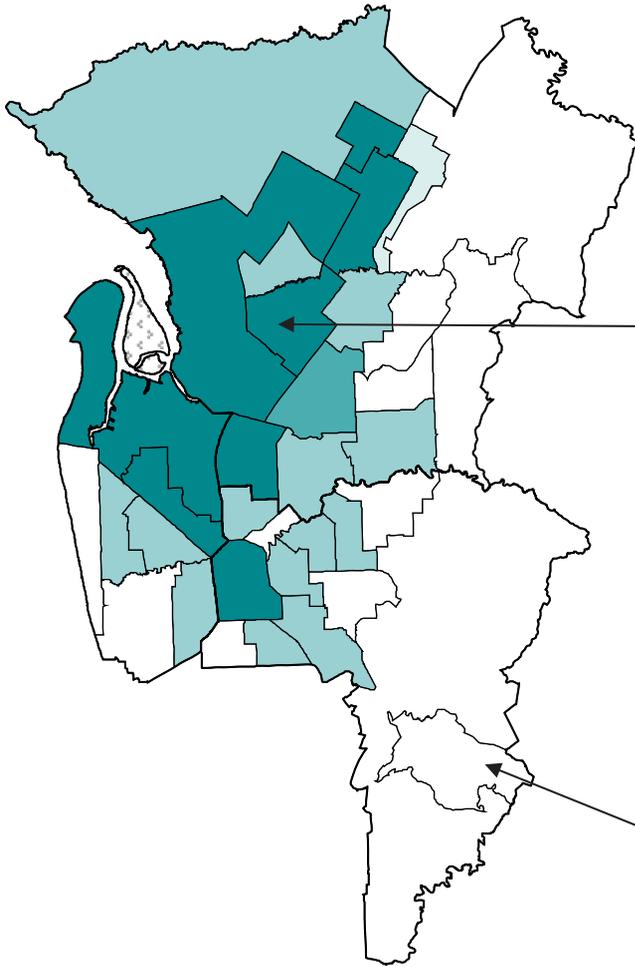
Where the standardised ratio (SR) is significantly different from the State rate under a test of statistical significance, this is indicated by an asterisk(s) attached to the SR – for example, 164<sup>\*\*</sup>. One asterisk indicates that the SR is statistically significant at the 5% level, that is, the likelihood of that ratio being due to chance is 5%; two asterisks indicate that the SR is significant at the 1% level, or that there is a smaller, 1%, chance of that SR occurring by chance.

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<sup>2</sup> The 14 LGAs (Local Government Areas) of the Central Northern region of Adelaide have been shown as 37 SLAs (Statistical Local Areas) for the publication of this data.

**Map 2: Example map: Avoidable mortality, 1999 to 2002**

*Mortality from avoidable causes age 0 to 74*



The darkest green shade is used in areas with the highest rates for the variable in the map. In this map it shows areas with a standardised ratio (SR) of 120 or higher, compared with the State rate of 100 (see legend): in this case the SR is 121\*\*.

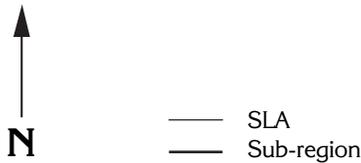
Put another way, at least 21% more people in Salisbury - Central died from avoidable causes than on average in the State. This is a poor outcome for the population in Salisbury - Central.

The two asterisks following the SR indicate that it is statistically significantly elevated – this is discussed on the previous page.

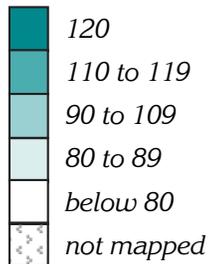
The areas in the map that are shown as white are those with the lowest rates for the variable in the map. In this map it shows areas with a standardised ratio of 79 or lower: in this case the SR is 67\*\*

That is there were at least 33% fewer people in Adelaide Hills - Central who died from avoidable causes, when compared to the State average. This is a good outcome for the population of Adelaide Hills - Central.

The two asterisks following the SR indicate that it is statistically significantly below average – this is discussed on the previous page.



Standardised Ratio (as an Index), by SLA



14 LGAs (Local Government Areas) of the Central Northern region of Adelaide have been divided into 37 SLAs (Statistical Local Areas) for the publication of this data. The above map has been divided into SLAs, as shown by the thinner lines. The SLAs have been grouped into Sub-regions - Northern, Western and Central East, which are shown by the thicker lines that overlay the SLA boundaries.

## INDICATORS: demography and socioeconomic status

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# Population: Children aged 0 to 4 years

Children aged 0 to 4 years as a proportion of the total population: data from the 2001 Census

## Overview

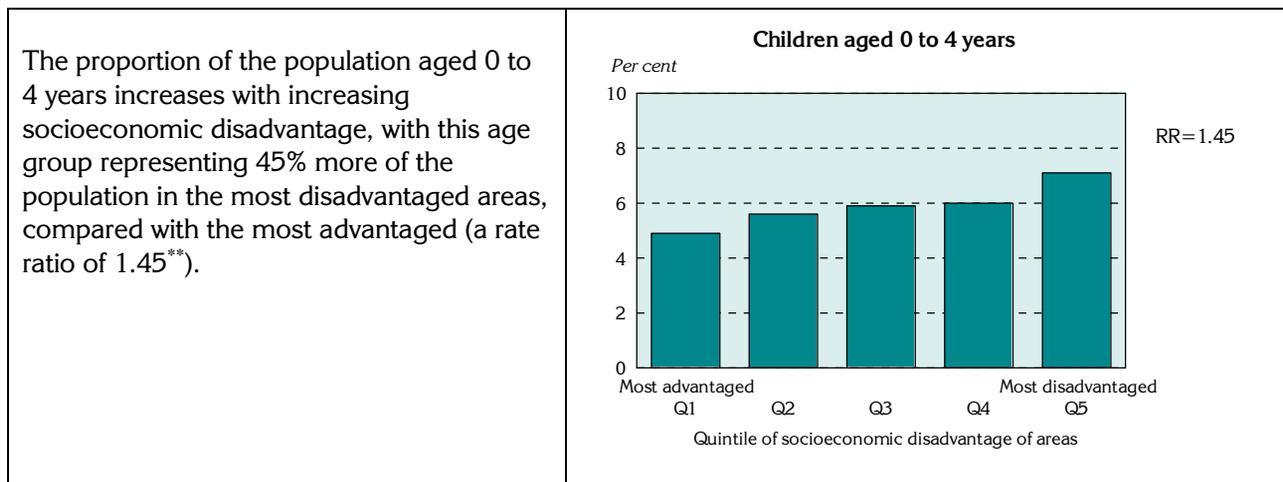
**Children are major users of health services, especially in the first years of life. Developmental immaturity makes them particularly vulnerable to the influence of adverse experiences and poor living conditions. Children living in families of lower socioeconomic status are more likely to have poorer health status and generally make more use of health services than those who are better off. Their geographic distribution is therefore an indicator of likely health service demand and the need for preventative programs.**

There were 43,921 children aged 0 to 4 years in the Central Northern region, 5.9% of the Region’s population (Table 4). The highest proportions of young children were located in outer northern SLAs, while the lowest proportions were in the more established inner and middle areas of the region (Map 3).

SLAs with the highest proportions of young children were located in the outer north, and included Playford - West Central (9.9%), Playford - East Central (9.0%), Salisbury - Inner North (8.8%), Salisbury Balance (8.3%), Tea Tree Gully - North (7.6%), Playford - Elizabeth (7.5%), Salisbury - Central (6.8%), Playford - Hills (6.6%), Playford - West (6.6%), Salisbury - North-East (6.5%) and Tea Tree Gully - Central (6.5%).

The largest numbers of 0 to 4 year olds were similarly located in the outer north, in Salisbury - Inner North (2,129 children), Salisbury - South-East (2,051), Tea Tree Gully - North (1,945), Playford - Elizabeth (1,869), Salisbury - Central (1,844), Tea Tree Gully - South (1,836), Tea Tree Gully - Central (1,714), Playford - East Central (1,678), as well as in Port Adelaide Enfield - Coast (1,639).

The SLAs with the lowest proportions of children aged 0 to 4 years in the Central Northern region were Adelaide (2.7%), Norwood Payneham St Peters - West (4.1%), Burnside - North-East (4.2%), Charles Sturt - Coastal (4.3%), Burnside - South-West (4.4%), and Walkerville (4.5%).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 3: Children aged 0 to 4 years, CNAHS, 2001

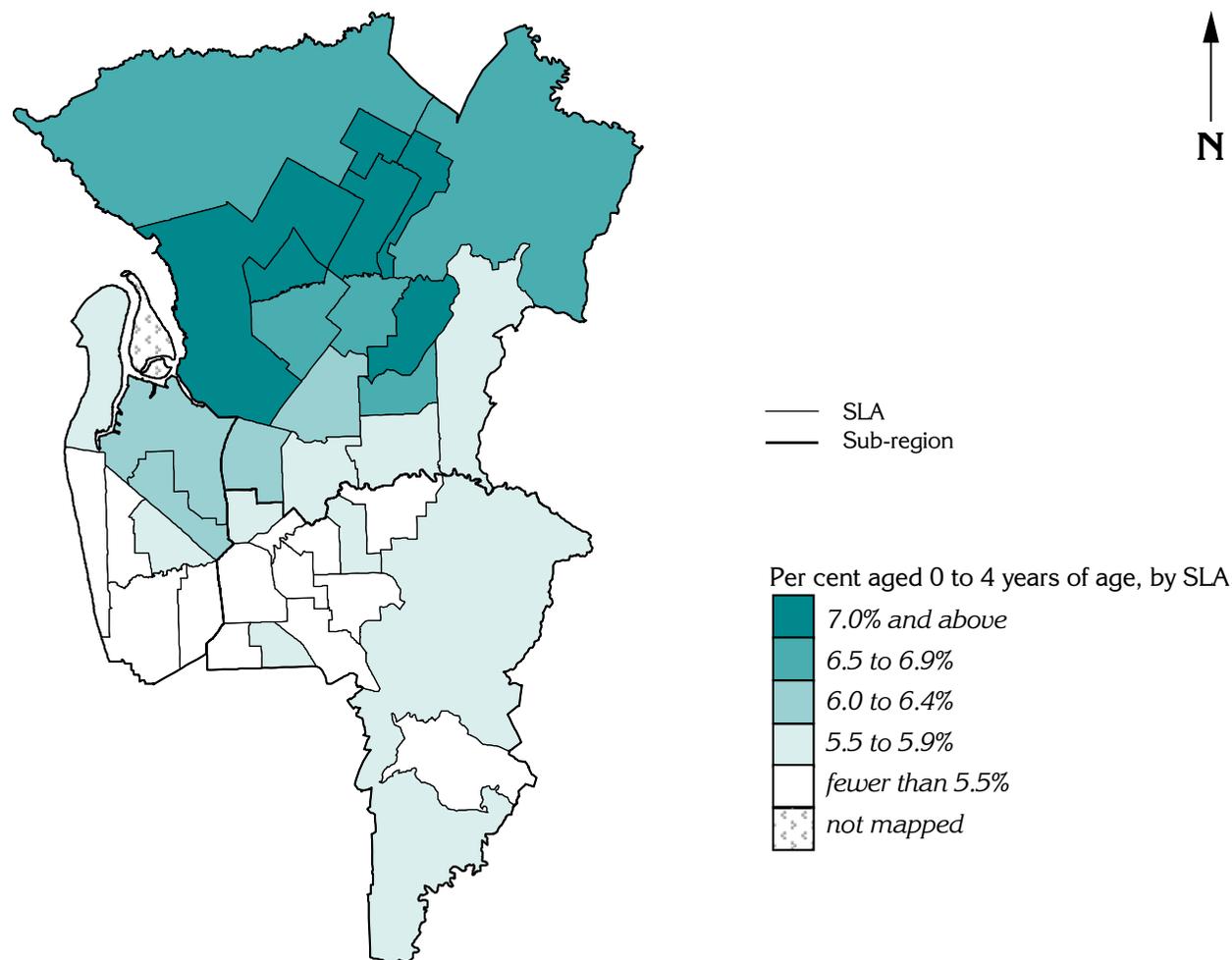


Table 4: Children aged 0 to 4 years, CNAHS, 2001

Area	Number		Per cent
	0 to 4 years	All ages	
<b>CNAHS</b>			
Quintile 1: most advantaged areas	6,746	137,719	4.9
Quintile 2	7,812	140,547	5.6
Quintile 3	9,100	163,136	5.9
Quintile 4	8,067	134,922	6.0
Quintile 5: most disadvantaged areas	12,196	163,166	7.1
<b>Rate ratio</b>	..	..	<b>1.45**</b>
Northern	22,420	321,961	7.0
Western	11,011	202,648	5.4
Central East	10,490	214,881	4.9
<b>CNAHS</b>	<b>43,921</b>	<b>739,490</b>	<b>5.9</b>
Southern	18,231	316,372	5.8
Metropolitan regions	62,152	1,055,862	5.9
State total	89,486	1,467,244	6.1

\* indicates statistical significance: see page 19

# Population: Children aged 5 to 14 years

Children aged 5 to 14 years as a proportion of the total population: data from the 2001 Census

## Overview

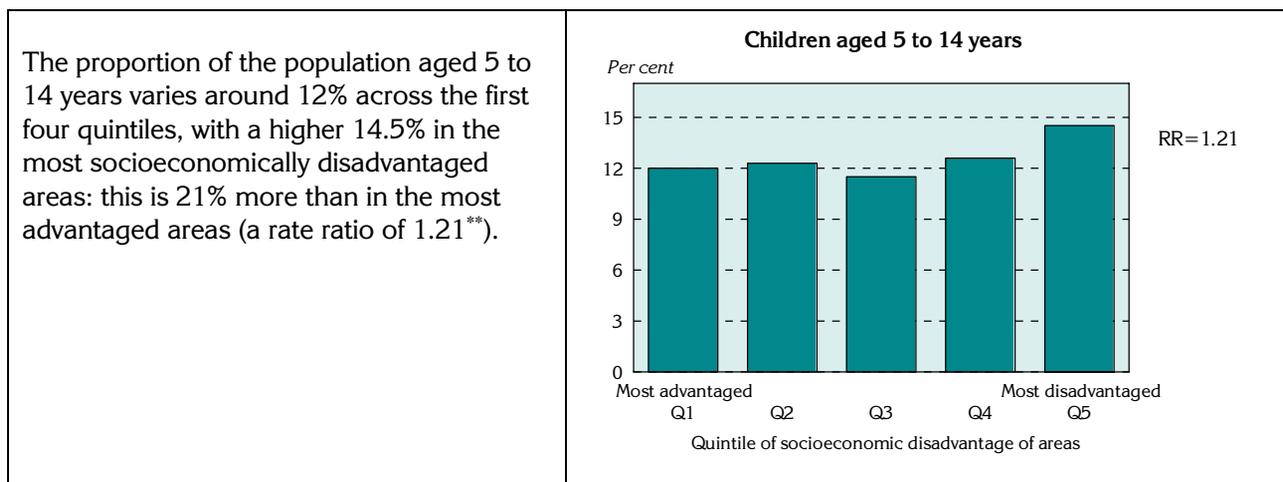
**Children, 5 to 14 years, are school aged, and are significant users of health services. Children of these ages living in families of lower socioeconomic status are more likely to have poorer health status and generally make greater use of primary and secondary health services than those who are better off. Their geographic distribution is therefore an indicator of likely health service demand and the need for preventative programs.**

There were 93,275 children aged five to 14 years of age in Central Northern, representing 12.6% of the total population in this region (Table 5). The highest proportions of children aged 5 to 14 years of age were concentrated in the outer northern SLAs, with above-average proportions in the outer eastern SLAs. Lower proportions were mapped in the city, and most inner and middle SLAs, as well as in the inner north-east (Map 4).

The majority of SLAs in Playford and parts of Salisbury had the highest proportions ranging between 17% and 19%, these included Playford - West Central (18.6%, 2,322 children), - East Central (18.3%, 3,391), - Hills (18.0%, 509) and - West (17.5%, 1,415), Salisbury - Inner North (18.0%, 4,327) and Balance (17.2%, 949). Tea Gully - North also had a high proportion of 17.1% (4,396). Other SLAs with above average proportions of children in this age group included Adelaide Hills - Central (15.8%, 1,988) and - Ranges (15.4%, 1,534), Salisbury - Central (15.2%, 4,110) and - North-East (14.8%, 3,263), Playford - Elizabeth (14.8%, 3,710), Tea Tree Gully - Central (13.8%, 3,611), Salisbury - South-East (13.3%, 4,353) and Campbelltown - East (13.0%, 3,464).

Relatively large numbers of children aged five to 14 years were located in Tea Tree Gully - South (3,931, 12.2%), Port Adelaide Enfield - Coast (3,479, 12.6%) and - Port (3,035, 12.2%) and Charles Sturt - North-East (3,017, 12.1%).

The smallest proportions of children in this age group were located in the SLA of Adelaide (4.2%, 547 children). There were also small proportions in West Torrens - East (8.9%, 2,038) and - West (9.7%, 2,656), Norwood Payneham and St Peters - East (8.9%, 2,038) and - West (9.3%, 1,601), Campbelltown - West (10.2%, 1,900), Unley - West (10.5%, 1,703) and - East (10.5%, 1,984), Port Adelaide Enfield - East (10.5%, 2,845), Charles Sturt - Coastal (10.5%, 3,204), Walkerville (10.7%, 727) and Charles Sturt - Inner East (10.8%, 2,246).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 4: Children aged 5 to 14 years, CNAHS, 2001

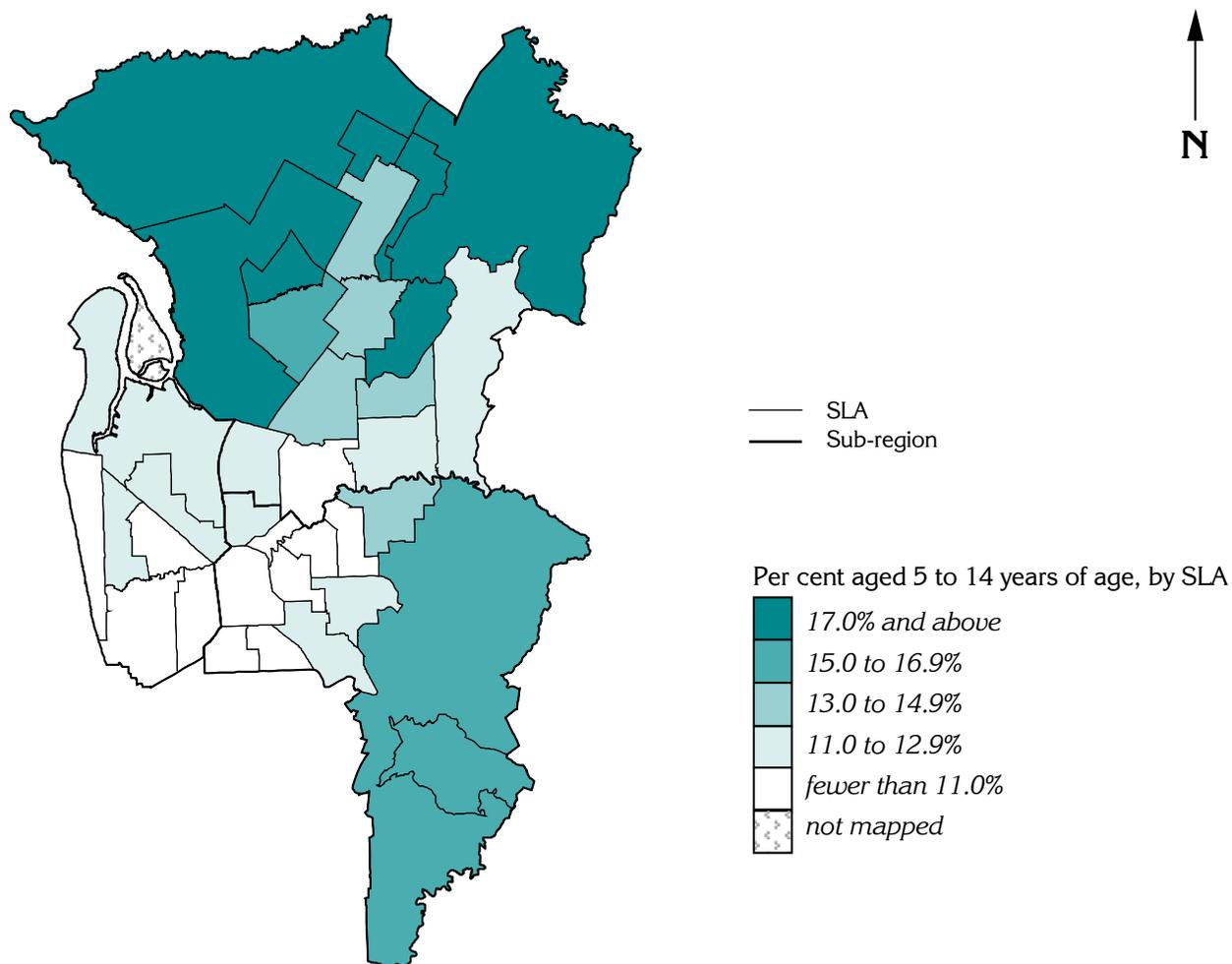


Table 5: Children aged 5 to 14 years, CNAHS, 2001

Area	Number		Per cent
	5 to 14 years	All ages	
<b>CNAHS</b>			
Quintile 1: most advantaged areas	16,472	137,719	12.0
Quintile 2	17,333	140,547	12.3
Quintile 3	18,835	163,136	11.5
Quintile 4	16,951	134,922	12.6
Quintile 5: most disadvantaged areas	23,684	163,166	14.5
<b>Rate ratio</b>	..	..	<b>1.21**</b>
<b>Northern</b>	<b>46,896</b>	<b>321,428</b>	<b>14.6</b>
<b>Western</b>	<b>22,504</b>	<b>203,181</b>	<b>11.1</b>
<b>Central East</b>	<b>23,873</b>	<b>214,881</b>	<b>11.1</b>
<b>CNAHS</b>	<b>93,275</b>	<b>739,490</b>	<b>12.6</b>
<b>Southern</b>	<b>42,065</b>	<b>316,372</b>	<b>13.3</b>
<b>Metropolitan regions</b>	<b>135,340</b>	<b>1,055,886</b>	<b>12.8</b>
<b>State total</b>	<b>197,807</b>	<b>1,467,244</b>	<b>13.5</b>

\* indicates statistical significance: see page 19

# Population: Young people aged 15 to 24 years

Young people aged 15 to 24 years as a proportion of the total population: data from the 2001 Census

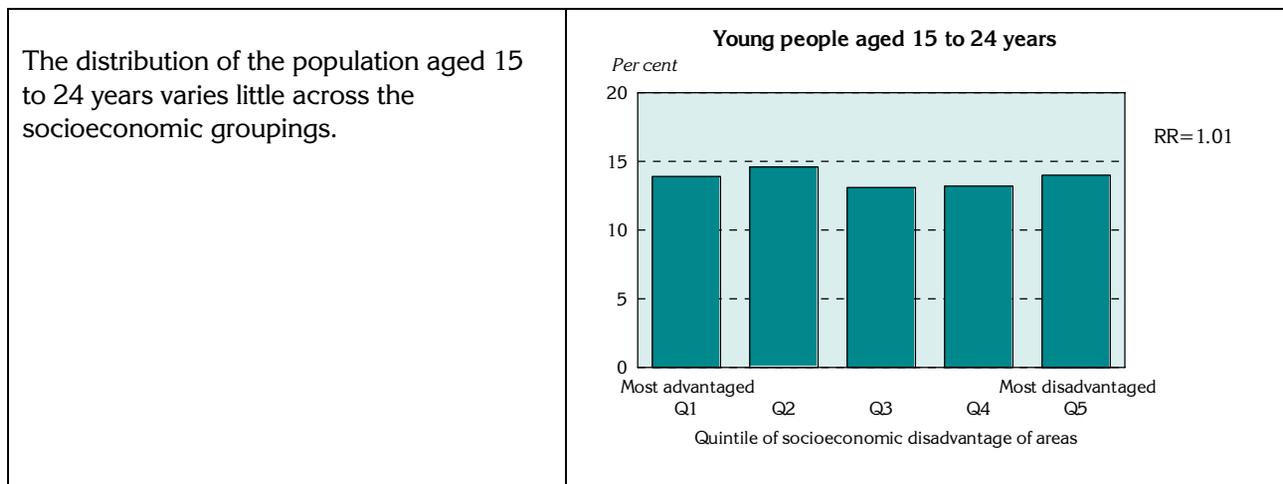
## Overview

**Young people under-utilise health services. Many are unaware of the services that are available, or how to access them, particularly when they are in distress. Their use of health services is also influenced by factors such as cost, availability of public transport, accessibility, and perceived authoritarian and judgmental attitudes of service providers. These can lead to young people foregoing health care. Young people of lower socioeconomic status are more likely to have poorer health status than those who are better off. Their geographic distribution is therefore an indicator of likely health service demand and the need for youth-friendly, preventative programs.**

There were 101,828 young people aged 15 to 24 years in the Central Northern region in 2001, 13.8% of the total population for this region (Table 6). The largest proportions of 15 to 24 year olds were located in outer northern SLAs, as well as in the city and adjacent SLAs, lower proportions were located in the east and north-west (Map 5).

With nearly one in four people in this age group, the City of Adelaide had the highest proportion of young people (22.6%). This was followed by Salisbury Balance (15.9%), Norwood Payneham and St Peters - West (15.8%), Salisbury - Central (15.4%), Salisbury - Inner North (15.4%), Tea Tree Gully - Central (15.2%), Playford - West Central (14.9%), Salisbury - North-East (14.6%), West Torrens - East (14.6%), Unley - West (14.5%), Tea Tree Gully - South (14.5%), Tea Tree Gully - Hills (14.2%), Playford - Elizabeth (14.1%) and Tea Tree Gully - North (14.0%).

The largest numbers of young people were located in the outer SLAs of the region, in Tea Tree Gully - South (4,686 young people), Salisbury - South-East (4,501), Salisbury - Central (4,166), Tea Tree Gully - Central (3,981), Charles Sturt - Coastal (3,847), Salisbury - Inner North (3,695), Campbelltown - East (3,691), Port Adelaide Enfield - East (3,658), Tea Tree Gully - North (3,599), Playford - Elizabeth (3,546) and West Torrens - West (3,417).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 5: Young people aged 15 to 24 years, CNAHS, 2 001

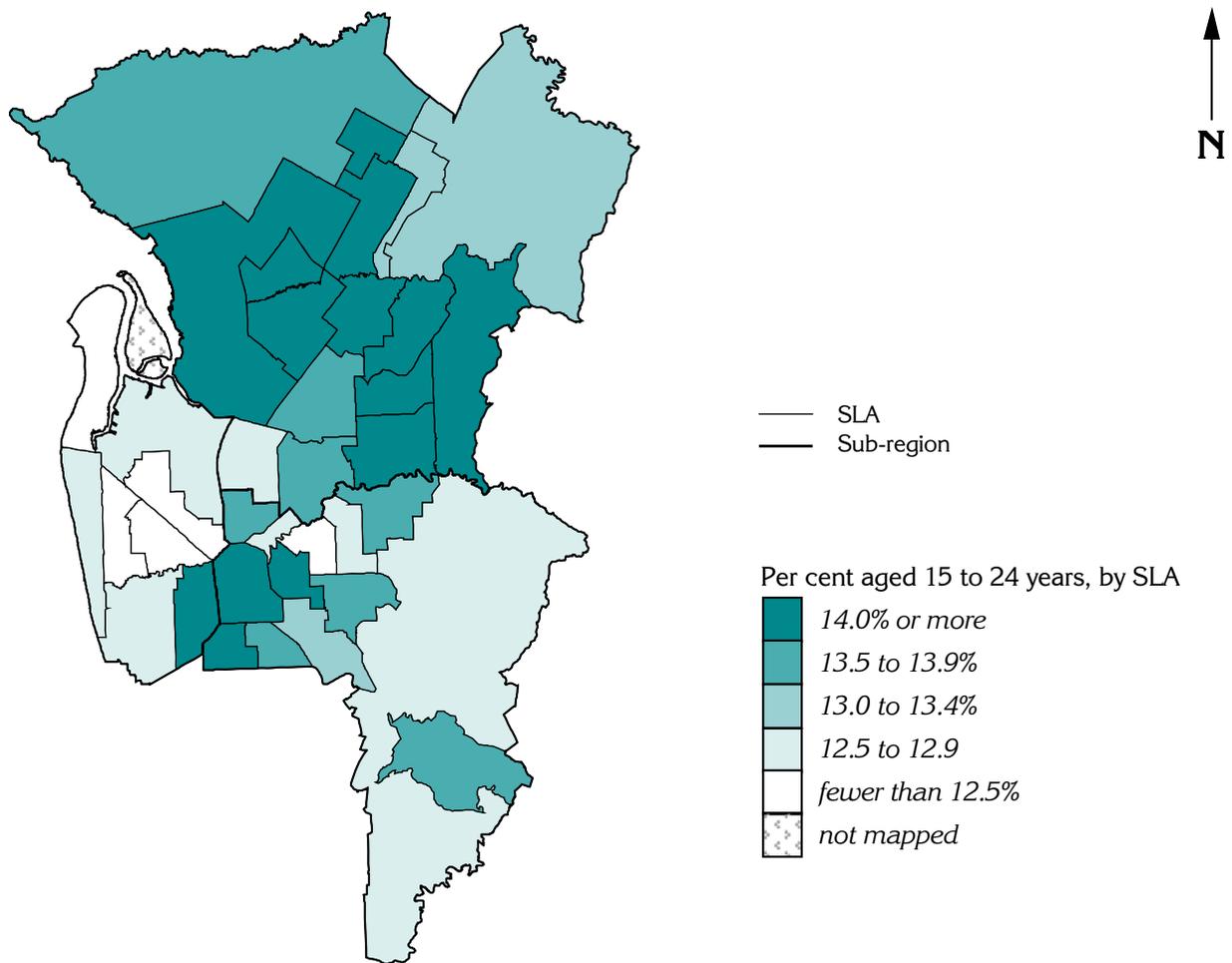


Table 6: Young people aged 15 to 24 years, CNAHS, 2001

Area	Number		Per cent
	15 to 24 years	All ages	
<b>CNAHS</b>			
Quintile 1: most advantaged areas	19,179	137,719	13.9
Quintile 2	20,585	140,547	14.6
Quintile 3	21,445	163,136	13.1
Quintile 4	17,805	134,922	13.2
Quintile 5: most disadvantaged areas	22,814	163,166	14.0
<b>Rate ratio</b>	<b>..</b>	<b>..</b>	<b>1.01</b>
<b>Northern</b>	<b>45,961</b>	<b>321,428</b>	<b>14.3</b>
<b>Western</b>	<b>25,460</b>	<b>203,181</b>	<b>12.5</b>
<b>Central East</b>	<b>30,407</b>	<b>214,881</b>	<b>14.2</b>
<b>CNAHS</b>	<b>101,828</b>	<b>739,490</b>	<b>13.8</b>
<b>Southern</b>	<b>43,208</b>	<b>316,372</b>	<b>13.7</b>
<b>Metropolitan regions</b>	<b>145,036</b>	<b>1,055,862</b>	<b>13.7</b>
<b>State total</b>	<b>191,901</b>	<b>1,467,244</b>	<b>13.1</b>

# Population: People aged 65 years and over

People aged 65 years and over as a proportion of the total population: data from the 2001 Census

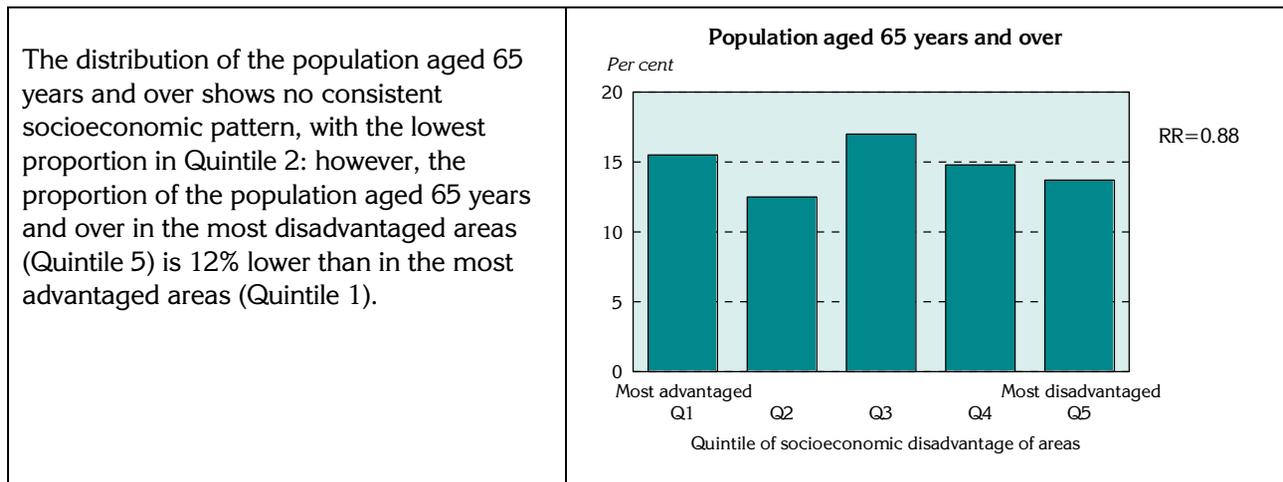
## Overview

**Australia is an ageing society, brought about in part by reduced mortality rates at older ages, a trend that has become especially evident over the past two to three decades. Increased morbidity is often associated with reduced mortality, and the incidence of an older population is likely to indicate areas where increased health and welfare services will be required.**

In 2001, there were 108,897 people aged 65 years and over living in the region, 14.7% of the total population (Table 7). The main concentrations of older people are in the inner and middle suburbs, with an above-average proportion in the outer north, in Playford-Elizabeth (Map 6).

The inner suburbs with the highest proportions of people aged 65 and over were Norwood Payneham St Peters - East (23.1%), West Torrens - West (22.6%), Campbelltown - West (21.9%), Walkerville (21.3%), Port Adelaide Enfield - Inner (20.6%), Charles Sturt - Inner East (19.9%), Burnside - South-West (19.4%), Charles Sturt - Inner West (19.2%) and Burnside - North-East (19.2%).

The largest numbers of people aged 65 and over were distributed in a similar pattern with high numbers in West Torrens - West (6,191 people), Charles Sturt - Coastal (5,707), Charles Sturt - Inner West (4,605), Port Adelaide Enfield - East (4,556), Tea Tree Gully - South (4,459), Playford - Elizabeth (4,383), Port Adelaide Enfield - Port (4,365), Port Adelaide Enfield - Coast (4,330), Charles Sturt - Inner East (4,150), Campbelltown - West (4,086) and Charles Sturt - North-East (4,062).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 6: People aged 65 years and over, CNAHS, 2001

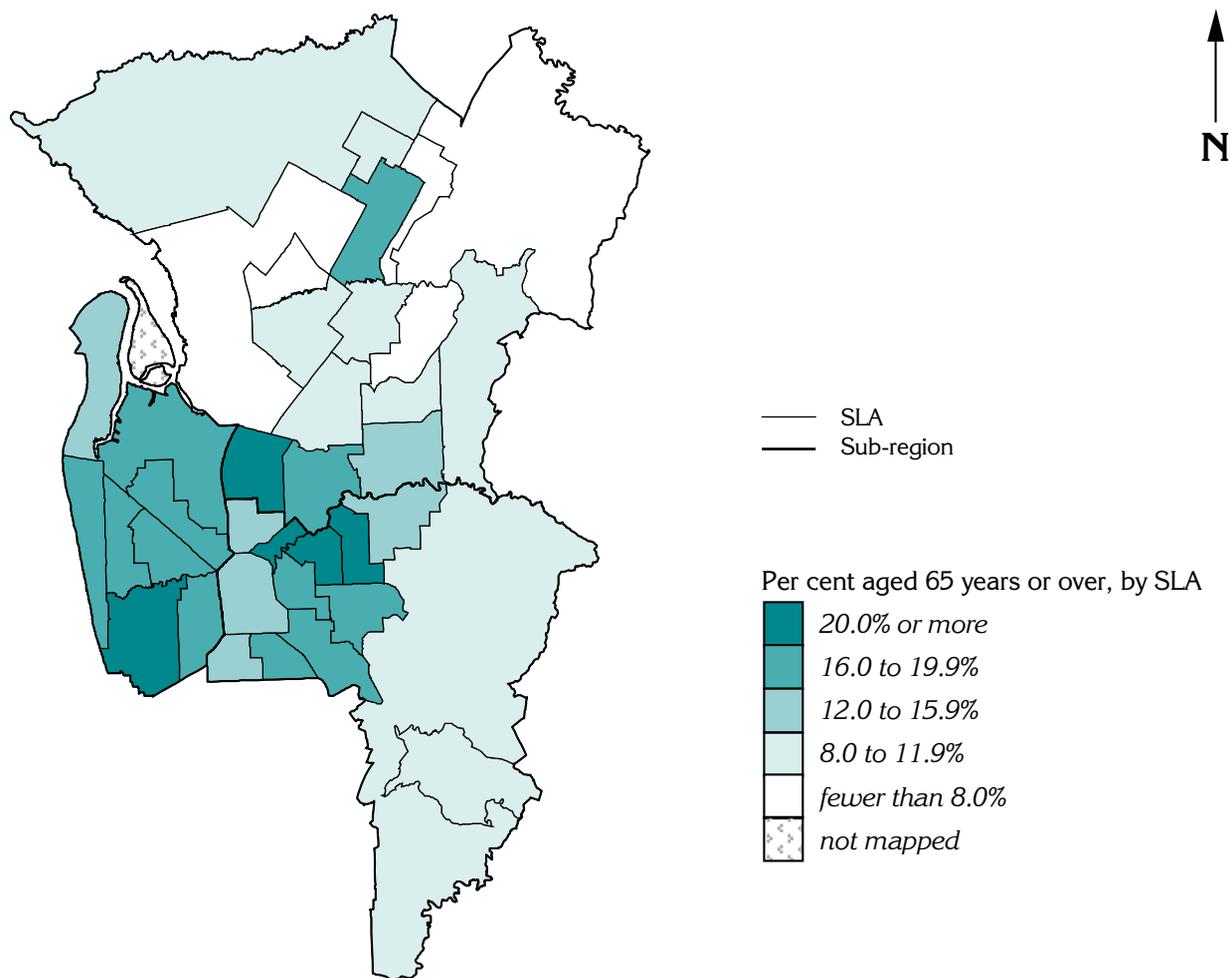


Table 7: People aged 65 years and over, CNAHS, 2001

Area	Number		Per cent
	65 years and over	All ages	
<b>CNAHS</b>			
Quintile 1: most advantaged areas	21,294	137,719	15.5
Quintile 2	17,856	140,547	12.5
Quintile 3	27,780	163,136	17.0
Quintile 4	19,931	134,922	14.8
Quintile 5: most disadvantaged areas	22,306	163,166	13.7
<b>Rate ratio</b>	<b>..</b>	<b>..</b>	<b>0.88*</b>
<b>Northern</b>	<b>35,939</b>	<b>321,428</b>	<b>11.2</b>
<b>Western</b>	<b>37,306</b>	<b>203,181</b>	<b>18.4</b>
<b>Central East</b>	<b>35,652</b>	<b>214,881</b>	<b>16.6</b>
<b>CNAHS</b>	<b>108,897</b>	<b>739,490</b>	<b>14.7</b>
<b>Southern</b>	<b>47,595</b>	<b>316,372</b>	<b>15.0</b>
<b>Metropolitan regions</b>	<b>156,492</b>	<b>1,055,862</b>	<b>14.8</b>
<b>State total</b>	<b>215,603</b>	<b>1,467,244</b>	<b>14.7</b>

\* indicates statistical significance: see page 19

# Total Fertility Rate

The Total Fertility Rate is an estimate of the number a children a woman of child-bearing age will have over her lifetime: based on births data from 2000 to 2002

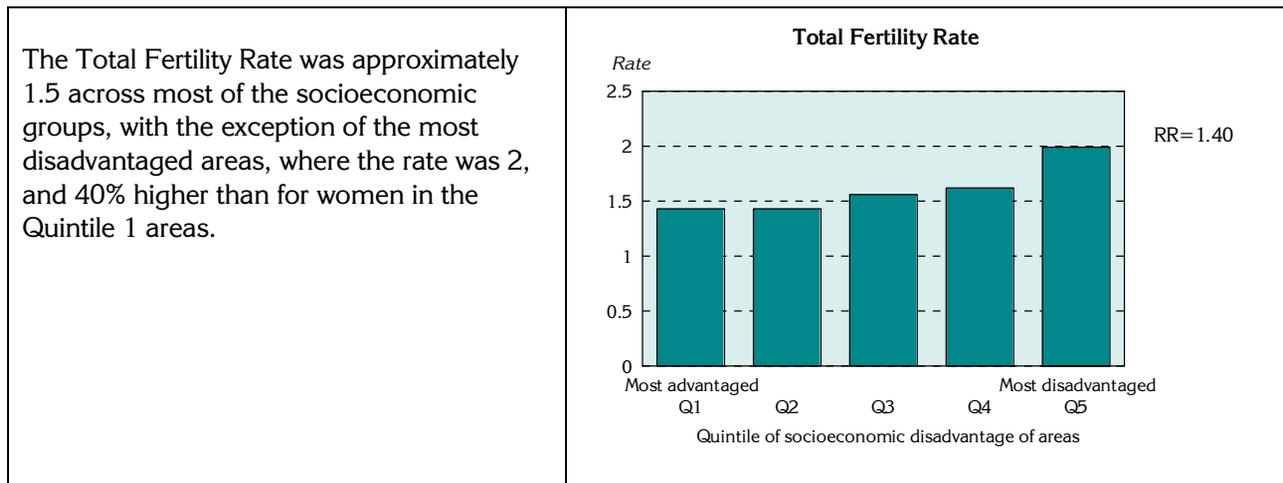
## Overview

**The Total Fertility Rate (TFR) measures the production of children and is calculated from details of the age of the female population, the number of births and the age of the mother at birth. SLAs recording fewer than 20 births were excluded from the analysis.**

The TFR for the Central Northern region was 1.61, with 26,850 births over the period from 2000 to 2002 (Table 8). The highest TFRs were recorded in a number of outer northern SLAs, with relatively high rates in some north-western SLAs (Map 7). This geographic distribution is consistent with that in Maps 3 and 4, of the 0 to 4 and 5 to 14 year age groups, in particular the high TFRs in the outer northern areas.

The highest TFRs in the region were 2.63 in Playford - West Central (744 births), Playford - Elizabeth (a TFR of 2.27, 1,172), Playford - Hills (2.08, 111), Playford - East Central (2.08, 928), Salisbury - Inner North (1.99, 1,172), Port Adelaide Enfield - Inner (1.93, 802), Salisbury Balance (1.89, 271), Port Adelaide Enfield - Port (1.89, 1,015) and Salisbury - Central (1.81, 1,096).

The SLAs with the lowest TFRs were Adelaide (a TFR of 0.73, 247 births), Unley - West (1.26, 515), Norwood Payneham and St Peters - West (1.26, 558), Burnside - North-East (1.31, 492), Charles Sturt - Coastal (1.32, 775), Unley - East (1.37, 638), Norwood Payneham and St Peters - East (1.39, 506), Prospect (1.45, 701) and West Torrens - East (1.45, 896).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 7: Total Fertility Rate, CNAHS, 2000 to 2002

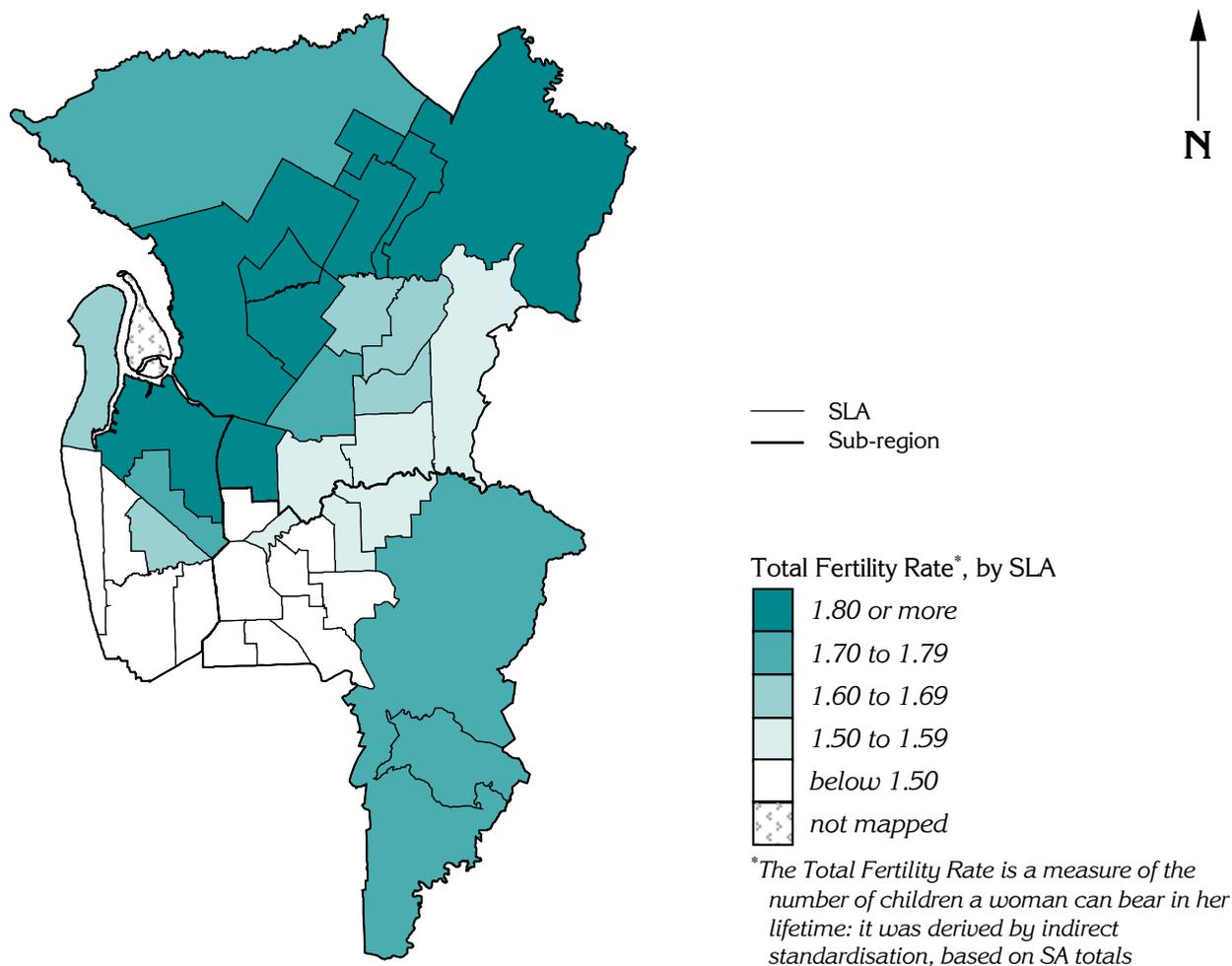


Table 8: Total Fertility Rate, CNAHS, 2000 to 2002

Area	Births	TFR
<b>CNAHS</b>		
Quintile 1: most advantaged areas	4,182	1.43
Quintile 2	4,655	1.43
Quintile 3	5,775	1.56
Quintile 4	4,928	1.62
Quintile 5: most disadvantaged areas	7,310	1.99
<b>Rate ratio</b>	<b>..</b>	<b>1.40**</b>
<b>Northern</b>	<b>13,182</b>	<b>1.81</b>
<b>Western</b>	<b>7,018</b>	<b>1.56</b>
<b>Central East</b>	<b>6,650</b>	<b>1.38</b>
<b>CNAHS</b>	<b>26,850</b>	<b>1.61</b>
<b>Southern</b>	<b>10,613</b>	<b>1.64</b>
<b>Metropolitan regions</b>	<b>37,479</b>	<b>1.62</b>
<b>State total</b>	<b>52,774</b>	<b>1.70</b>

\* indicates statistical significance: see page 19

## Families: Single parent families

Single parent families comprise female sole parents with dependent children under 15 years of age, as a proportion of all families: data from the 2001 Census

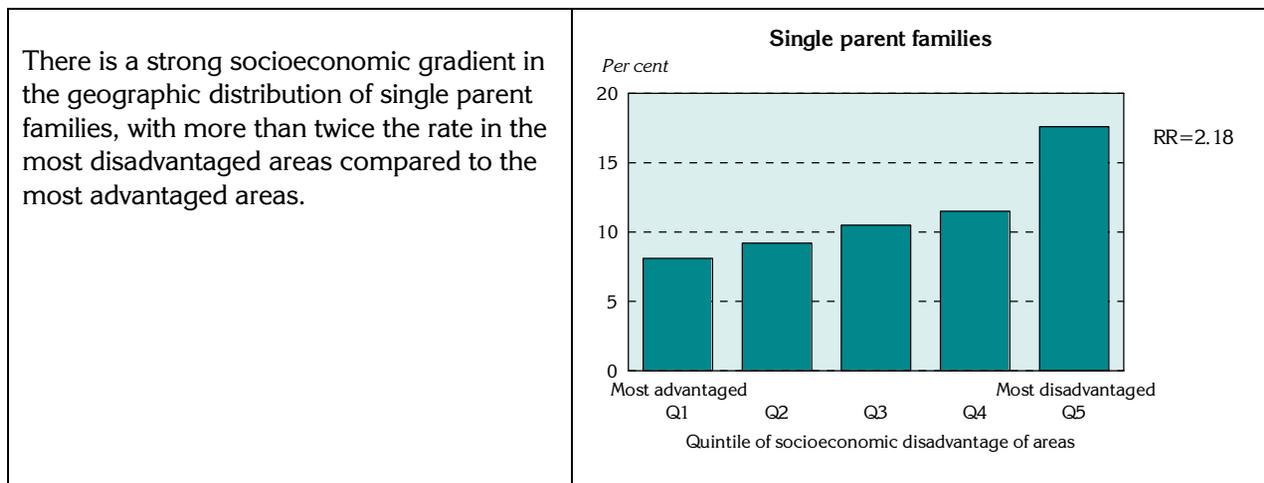
### Overview

*The majority of single parent families are characterised by poverty and hardship, have poorer health and are major users of publicly-funded services. Details of their location are, therefore, of importance to policy makers and those providing health, education, welfare, housing and transport services. With nearly half of single parents with dependent children under 15 years of age in the region having no job (44.9%), they are among the most reliant on government support. Access to employment, training and other opportunities are also issues for these families in outer suburban areas where opportunities are more limited for parents and school leavers alike.*

There were 22,888 single parent families in the region in 2001, 11.5% of all families (Table 9). The majority of SLAs with high proportions and large numbers of single parent families were located in the north-western and outer northern suburbs (Map 8). The lowest proportions cover an area running from the city, to the east and to the south-east and north-east.

The highest proportion of single parent families, a quarter of all families (24.7%), was in Playford - West Central. Very high proportions were also living in Playford - Elizabeth (21.7%), Port Adelaide Enfield - Port (17.5%), Salisbury - Inner North (17.0%), Port Adelaide Enfield - Inner (16.8%), and Salisbury - Central (15.5%). Playford - Elizabeth had the largest number, with 1,467 single parent families, followed by Salisbury - South East (1,131), Salisbury - Central (1,119), Port Adelaide Enfield - Port (1,113), and Salisbury - Inner North (1,110).

The SLAs with the lowest proportions include Playford - Hills (4.3%), Tea Tree Gully Hills (7.1%), Adelaide Hills - Ranges (6.6%), Walkerville (6.8%), Adelaide (7.9%), Burnside - North-East (7.3%), and Burnside - South-West (7.7%).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 8: Single parent families, CNAHS, 2001

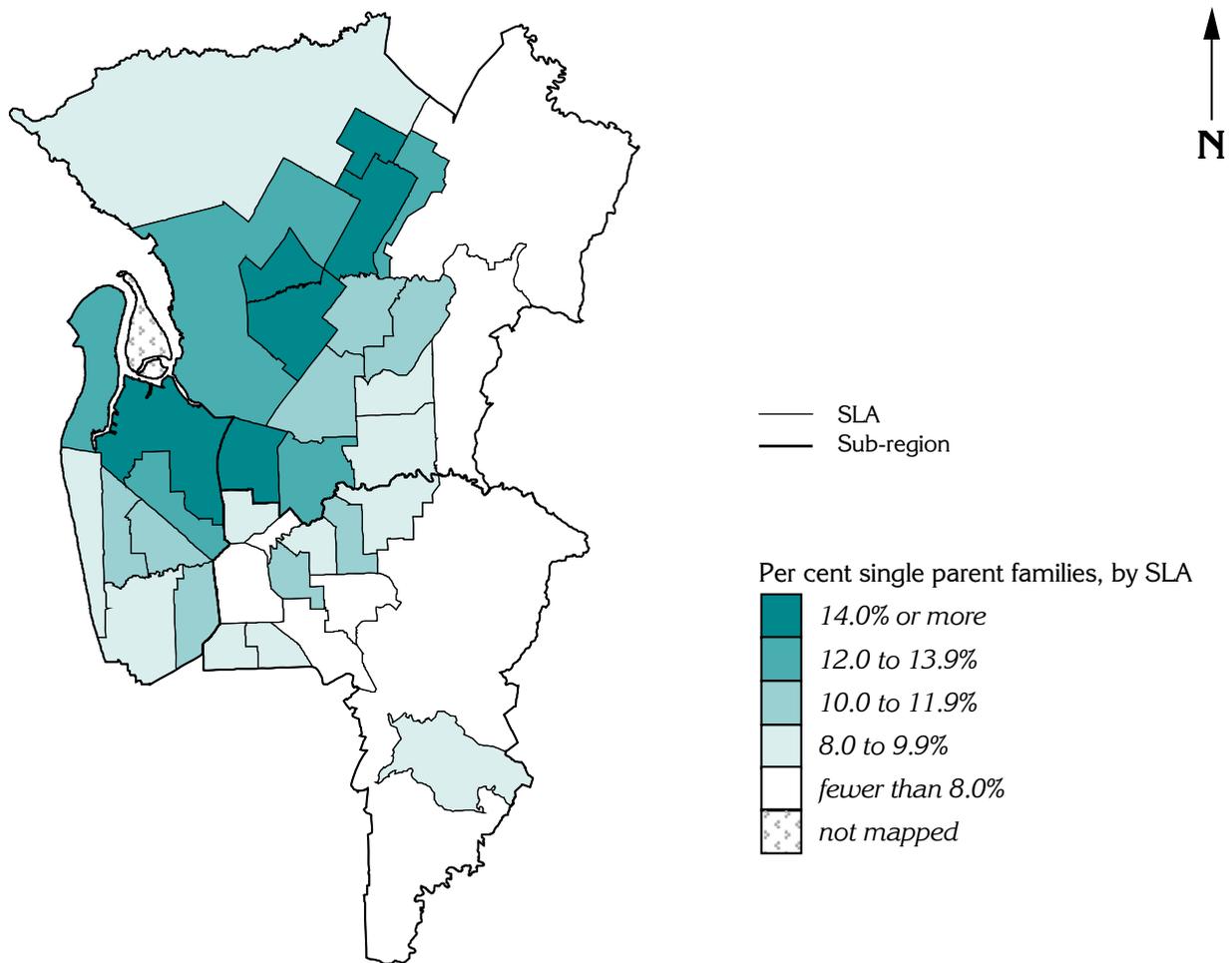


Table 9: Single parent families, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	2,896	8.1
Quintile 2	3,489	9.2
Quintile 3	4,621	10.5
Quintile 4	4,324	11.5
Quintile 5: most disadvantaged areas	7,558	17.6
<b>Rate ratio</b>	..	<b>2.16**</b>
Northern	11,854	13.3
Western	6,235	11.5
Central East	4,799	8.7
<b>CNAHS</b>	<b>22,888</b>	<b>11.5</b>
Southern	9,884	11.4
Metropolitan regions	32,772	11.5
State total	43,718	11.0

\* indicates statistical significance: see page 19

## Families: Low income families

*Low income families include families with an income of less than \$26,000 per year, as a proportion of all families: data from the 2001 Census*

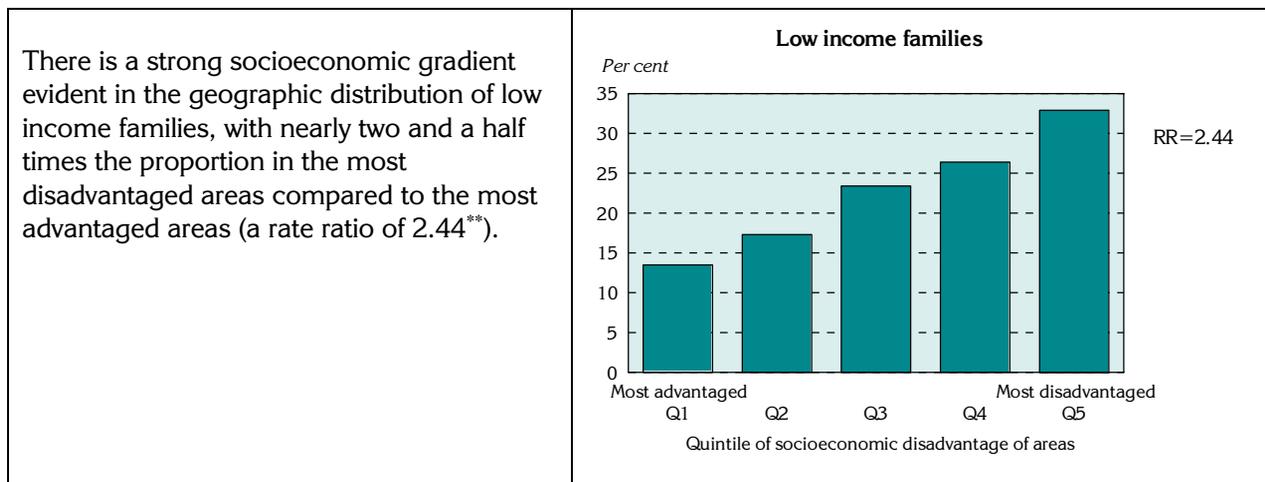
### Overview

*The use of low income as a measure of poverty is compromised to an extent by the fact that it is influenced by differences in family size, age structure and housing tenure and costs. While the variable will normally capture most welfare-dependent families, it will also include sizeable numbers of families for which low incomes are linked to their retirement status. However, the concentrations of low income families in areas with high proportions of people who are dependent on unemployment benefits, supporting parents' benefits, age or disability pensions suggests that many families in these areas are clearly suffering severe financial hardship. Those in outer suburban or country areas face additional hardship associated with accessing services. Income is among the most important individual-level determinants of wellbeing. People with a higher income generally enjoy better health and longer lives than people with a lower income.*

There were 45,834 families living on a low income, nearly one quarter of all families (23.1%) (Table 10). The map shows that the highest proportions of low income families were located in the inner northern, north-western and outer northern SLAs, with low proportions in the east (Map 9), generally reflecting the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

The highest proportions of families living on a low income were located in Playford - Elizabeth (41.4%, 2,794 families), Playford - West Central (41.0%, 1,363), Port Adelaide Enfield - Port (37.6%, 2,388), Port Adelaide Enfield - Inner (35.1%, 1,760), Charles Sturt - North-East (28.6%, 1,842), Campbelltown - West (28.5%, 1,464), Charles Sturt - Inner West (28.4%, 1,917), and Salisbury - Central (28.0%, 2,025).

There were also large numbers of families living on a low income in Salisbury - South-East (2,404), Port Adelaide Enfield - East (2,000), Port Adelaide Enfield - Coast (1,874) and Tea Tree Gully - South (1,865).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 9: Low income families, CNAHS, 2001

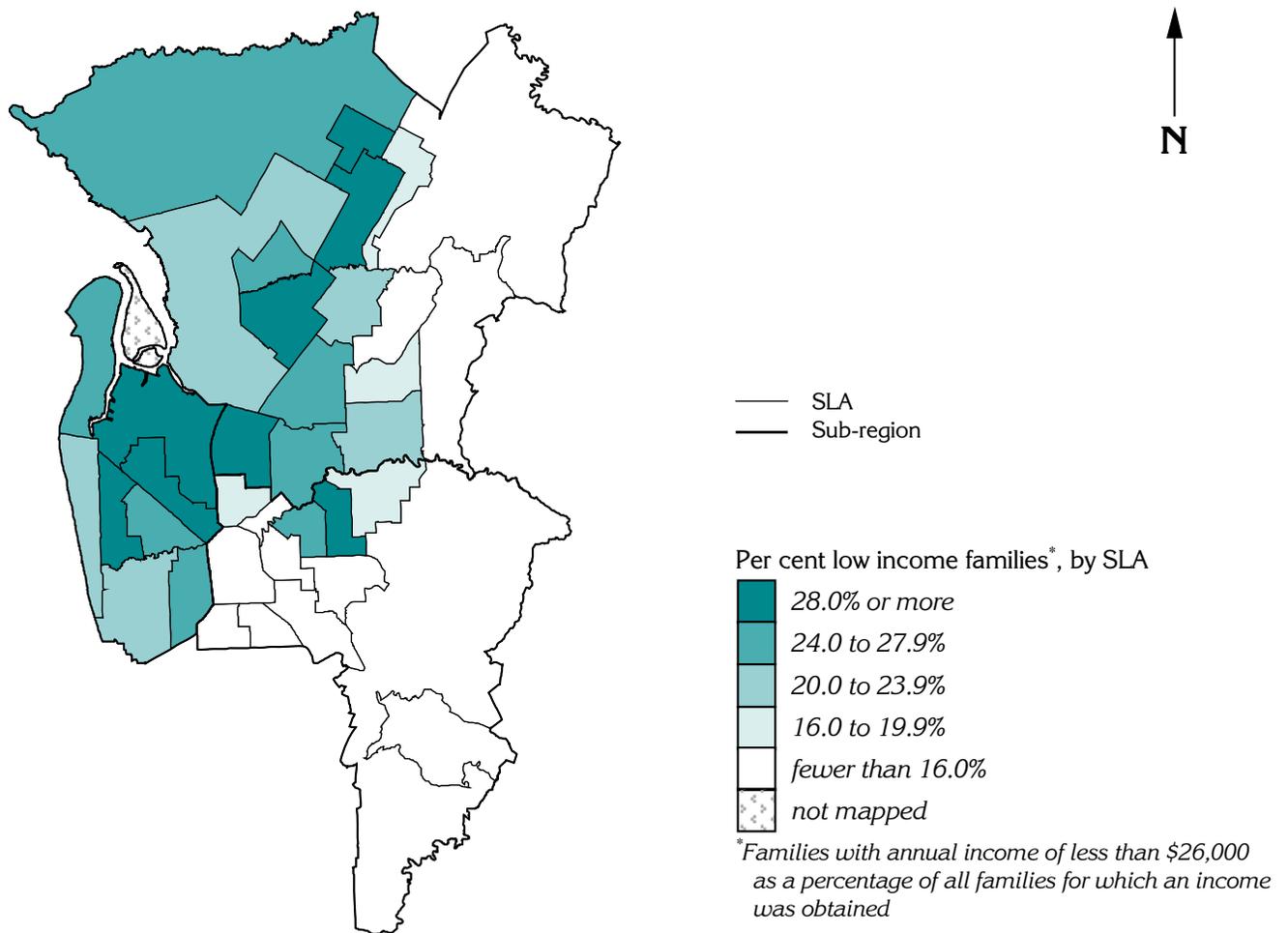


Table 10: Low income families, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	4,850	13.5
Quintile 2	6,571	17.3
Quintile 3	10,332	23.4
Quintile 4	9,908	26.4
Quintile 5: most disadvantaged areas	14,173	32.9
<b>Rate ratio</b>	..	<b>2.44**</b>
<b>Northern</b>	<b>22,155</b>	<b>24.8</b>
<b>Western</b>	<b>14,495</b>	<b>26.8</b>
<b>Central East</b>	<b>9,184</b>	<b>16.6</b>
<b>CNAHS</b>	<b>45,834</b>	<b>23.1</b>
<b>Southern</b>	<b>18,278</b>	<b>21.0</b>
<b>Metropolitan regions</b>	<b>64,115</b>	<b>22.4</b>
<b>State total</b>	<b>94,480</b>	<b>23.8</b>

\* indicates statistical significance: see page 19

## Families: Jobless families

*Jobless families include families (both single parent and couple families) with children under 15 years, where no parent is employed: data from the 2001 Census*

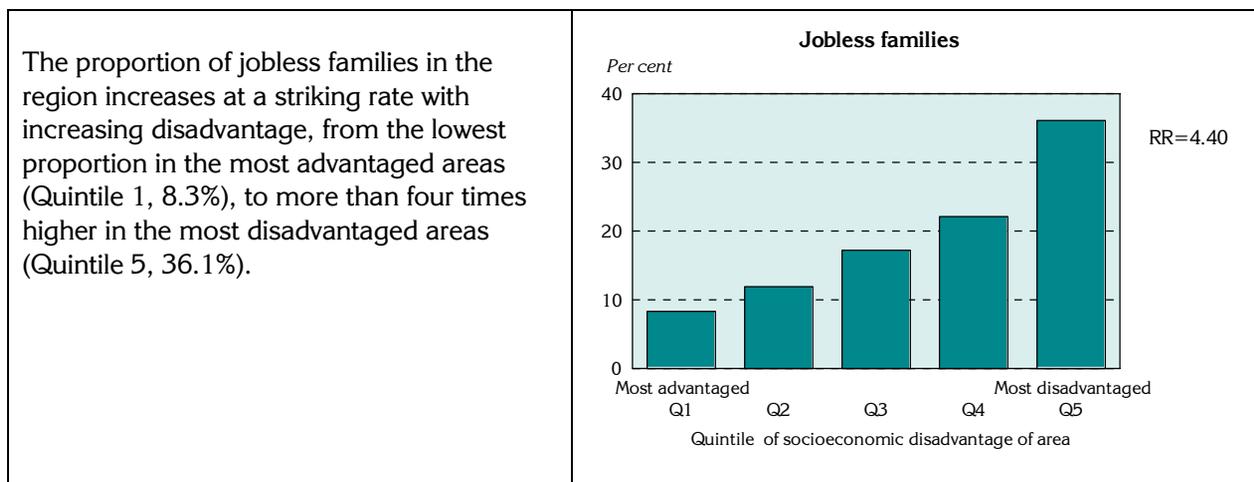
### Overview

**Children living without an employed parent, or children in jobless households, are at very significant risk of socioeconomic disadvantage. Jobless families with children are those with the greatest welfare dependency, facing the greatest financial hardship. They generally have poorer health, and their children often face poorer educational outcomes. These children may not have a role model of employment to follow, and so the joblessness of the parent(s) may mean that such children are more likely to have outcomes such as welfare dependency in the long term. However, there may be positive effects for children living without an employed parent; for example, if the reason the parent is without a job is to care for children or to undertake study to try to improve the future economic wellbeing of the household. Most of the children living without an employed parent live in one parent households <sup>60</sup>.**

There were 15,490 jobless families with children less than 15 years of age living in Central Northern region, 20.4% of all families in the region with children of this age (Table 11). The map shows a clear pattern of high rates of jobless families in the north-west, north and outer northern Statistical Local Areas, in contrast to much lower rates to the east and south- and north-east of the city (Map 10).

Approximately half of all families in Playford - Elizabeth were jobless (51.0%, 1,451 jobless families, the largest number in either metropolitan region) and Playford - West Central (48.9%, 879 jobless families). There were also high proportions in the SLAs of Port Adelaide Enfield - Port (41.2%, 1,051), Port Adelaide Enfield - Inner (36.8%, 699), Salisbury - Central (29.9%, 962), Salisbury - Inner North (27.7%, 957), Salisbury Balance (27.5%, 201, Charles Sturt - North-East (26.8%, 699), Port Adelaide Enfield - East (26.2%, 663) and Charles Sturt - Inner West (22.1%, 503).

Relatively large numbers of jobless families were also recorded in the SLAs of Salisbury - South-East (787 jobless families, 21.8%), Port Adelaide Enfield - Coast (566, 19.3%), Tea Tree Gully - South (503, 15.3%) and Salisbury - North-East (501, 19.4%).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 10: Jobless families with dependent children, CNAHS, 2001

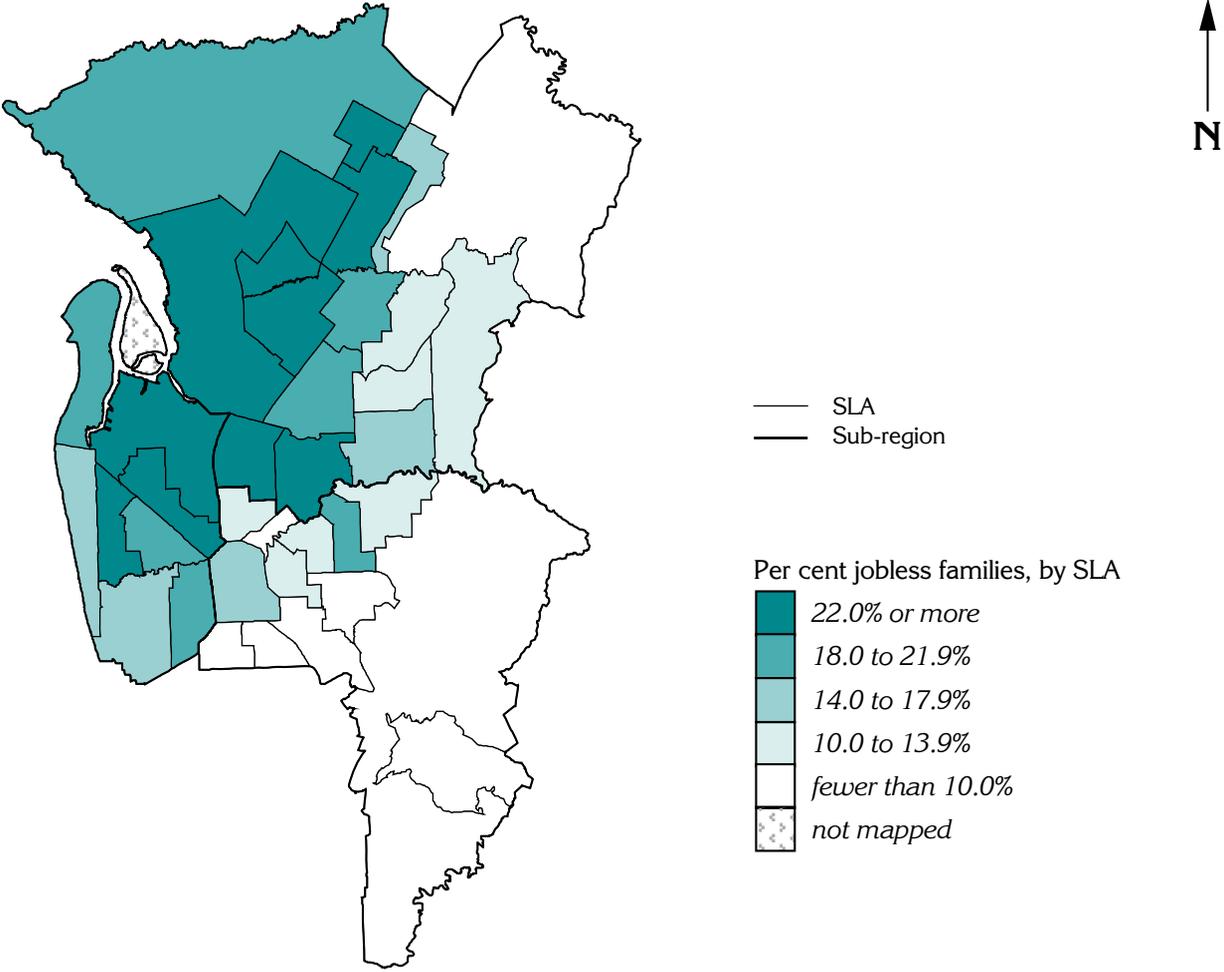


Table 11: Jobless families with dependent children, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,054	8.3
Quintile 2	1,696	11.9
Quintile 3	2,759	17.2
Quintile 4	3,082	22.1
Quintile 5: most disadvantaged areas	6,899	36.1
<b>Rate ratio</b>	<b>..</b>	<b>4.40**</b>
<b>Northern</b>	<b>9,104</b>	<b>24.1</b>
<b>Western</b>	<b>4,351</b>	<b>22.8</b>
<b>Central East</b>	<b>2,035</b>	<b>10.6</b>
<b>CNAHS</b>	<b>15,490</b>	<b>20.4</b>
<b>Southern</b>	<b>5,592</b>	<b>16.6</b>
<b>Metropolitan regions</b>	<b>21,082</b>	<b>19.2</b>
<b>State total</b>	<b>29,203</b>	<b>18.7</b>

\* indicates statistical significance: see page 19

# Labour force: Unemployment rate

The number of unemployed as a proportion of the labour force: data from the Department of Education and Workplace Relations, at June 2003

## Overview

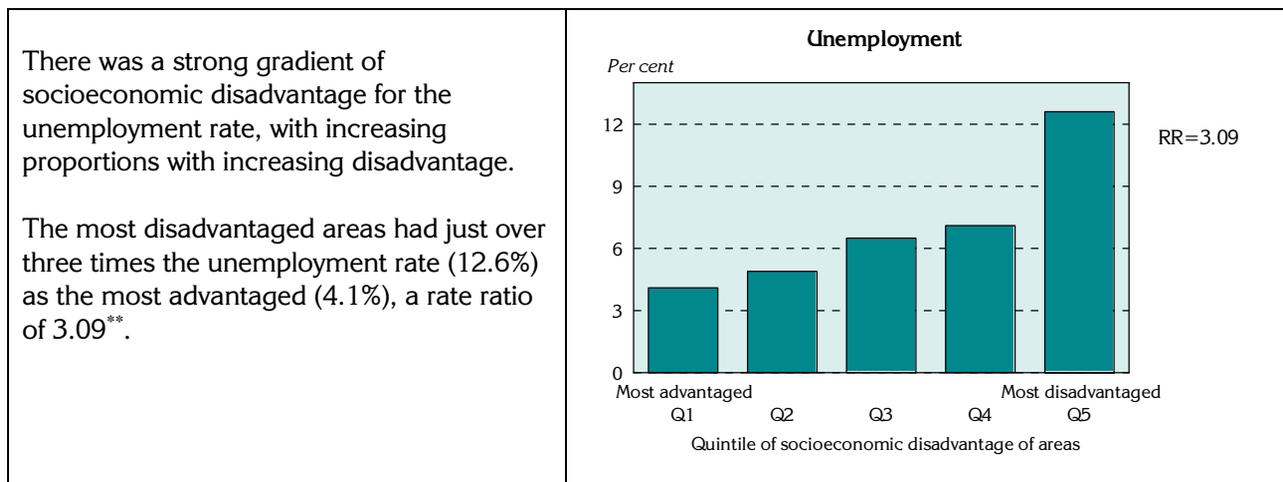
*Those who do not have access to secure and satisfying work are less likely to have an adequate income; and unemployment and under-employment are generally associated with reduced life opportunities and poorer health and wellbeing.*

*Readers should note that the official measure of unemployment does not take account of hidden unemployment (measured by the labour force participation rate) or under-employment (resulting from the loss of full-time jobs and the creation of part-time jobs). An alternative labour force indicator, which addresses these deficiencies, suggests the real level of unemployment in South Australia is some three times the official rate <sup>33</sup>.*

The unemployment rate for Central Northern was 6.9%, representing 27,012 unemployed people (Table 12). The rate of youth unemployment at the 2001 Census is much higher, at 17.2% for 15 to 24 year olds: young people aged 15 to 19 years of age have a rate nearly three times that of the general population (20.1%), while the rate for those aged 20 to 24 was lower, yet still more than double that of the general population (15.5%). The overall spatial pattern is of high unemployment rates across an area from the city centre to the north-western and inner northern suburbs, as well as in a number of outer northern suburbs (Map 11).

By far the highest unemployment rates in Central Northern were those in the SLAs of Playford - Elizabeth and - West Central (21.1% and 17.3%, respectively). Other SLAs with high rates were Port Adelaide Enfield - Port and - Inner (14.3% and 11.8%, respectively), Adelaide (10.5%), Charles Sturt - North-East (10.2%) and Salisbury - Central and - Inner North (9.9% and 9.8%, respectively).

The largest numbers of unemployed people were in Playford - Elizabeth (1,992 people), Port Adelaide Enfield - Port (1,465), Salisbury - Central and - South-East (1,320 and 1,267, respectively), Charles Sturt - North-East (1,224) and Salisbury - Inner North (1,201). Tea Tree Gully - North and - Hills (2.8 and 2.9%, respectively), Adelaide Hills - Central (3.0%) and Burnside - South-West (3.1%) had the lowest rates in the region.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 11: Unemployment rate, CNAHS, 2003

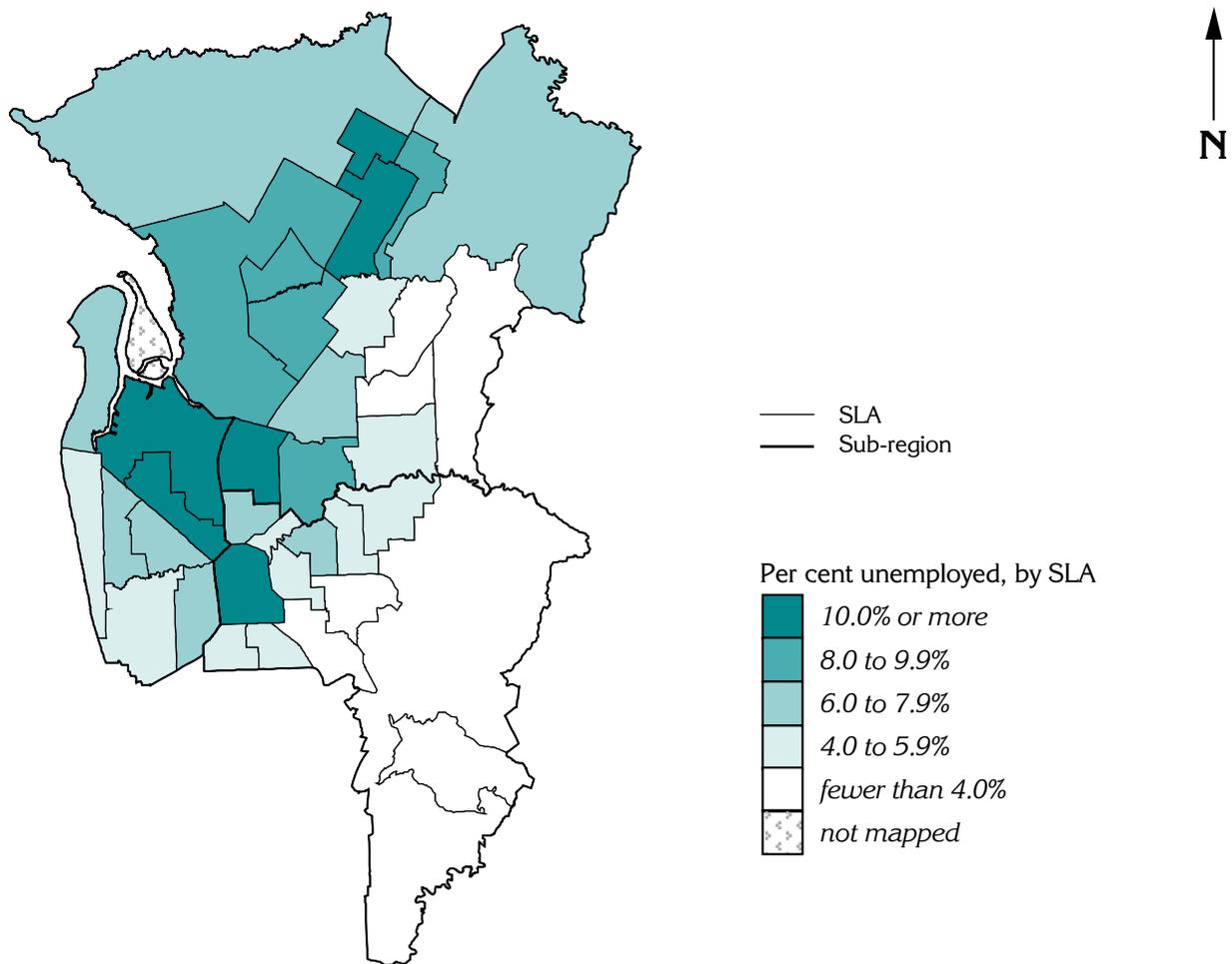


Table 12: Unemployment rate, CNAHS, 2003

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	3,223	4.1
Quintile 2	3,967	4.9
Quintile 3	5,564	6.5
Quintile 4	4,959	7.1
Quintile 5: most disadvantaged areas	9,299	12.6
<b>Rate ratio</b>	..	<b>3.09**</b>
<b>Northern</b>	<b>13,202</b>	<b>7.8</b>
<b>Western</b>	<b>7,713</b>	<b>7.6</b>
<b>Central East</b>	<b>6,097</b>	<b>5.1</b>
<b>CNAHS</b>	<b>27,012</b>	<b>6.9</b>
<b>Southern</b>	<b>9,802</b>	<b>5.9</b>
<b>Metropolitan regions</b>	<b>36,815</b>	<b>6.6</b>
<b>State total</b>	<b>51,637</b>	<b>6.8</b>

\* indicates statistical significance: see page 19

# Labour force: Unskilled and semi-skilled workers

People with an occupation classed as unskilled or semi-skilled, as a proportion of all employed people: data from the 2001 Census

## Overview

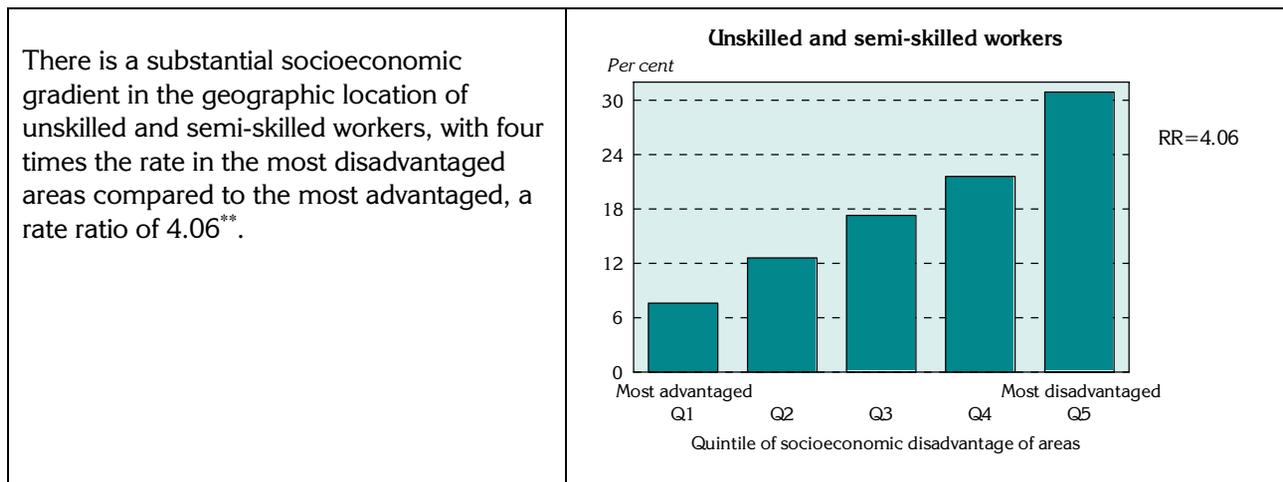
*Occupation remains the most important determinant of wealth, social standing and wellbeing for most people in Australian society. The occupations described here as unskilled and semi-skilled encompass most lower paid, and less skilled, blue collar work, and their prevalence therefore forms a useful general measure of low socioeconomic status. These occupations (ABS 'intermediate production & transport workers' and 'labourers & related workers') have shown an overall decline as a proportion of the total employed labour force in South Australia since 1986, down by 21.2% in Metropolitan Adelaide. There was also a reduction in country South Australia between 1986 and 1991, before small increases over the following two census years, to give an overall decline of 5.4%. These trends have resulted in a widening gap between Metropolitan Adelaide and country areas.*

The 55,634 unskilled and semi-skilled workers in the Central Northern region represented 17.4% of the labour force in 2001 (Table 13). The pattern of variation in the proportion of workers in these categories reflects the long-established contrast between the working class (inner and outer) northern and western suburbs, and the middle and upper class suburbs in and around the city, and to the east and south-east (Map 12). It is also markedly similar to that for the unemployment rate.

The highest proportion of these workers in either metropolitan region was located in Playford - West Central (42.8%, 1,411 workers). High proportions were also recorded in Playford - Elizabeth (36.7%, 2,384), Salisbury - Inner North (35.5%, 3,358), Port Adelaide Enfield - Port (32.8%, 2,546), Salisbury - Central (31.9%, 3,278), Salisbury Balance (29.9%, 706), Playford - East Central (25.5%, 2,126), Playford - West (25.0, 830) and Port Adelaide Enfield - Inner (24.0%, 1,568).

The largest number of unskilled and semi-skilled workers in the metropolitan regions was located in Salisbury - South-East (3,455, 23.9%). There were also large numbers in Port Adelaide Enfield - Coast (2,419, 20.5%), Tea Tree Gully - South (2,416, 15.9%), Salisbury - North-East (2,318, 23.4%), Tea Tree Gully - Central (2,180, 16.4%), Port Adelaide Enfield - East (2,016, 18.5%), Charles Sturt - North-East (2,005, 20.8%) and Charles Sturt - Inner West (1,913, 20.2%).

Values of less than 12.0% of the labour force in these occupations were common in SLAs in the eastern suburbs, with the lowest proportions in Burnside - South-West (5.1%), Burnside - North-East (5.9%), Adelaide (5.9%), Walkerville (5.9%), Norwood Payneham St Peters - West (6.2%) and Unley - East (6.6%); the SLAs of Campbelltown - West and - East (15.6% and 14.2%, respectively) were the exceptions.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 12: Unskilled and semi-skilled workers, CNAHS, 2001

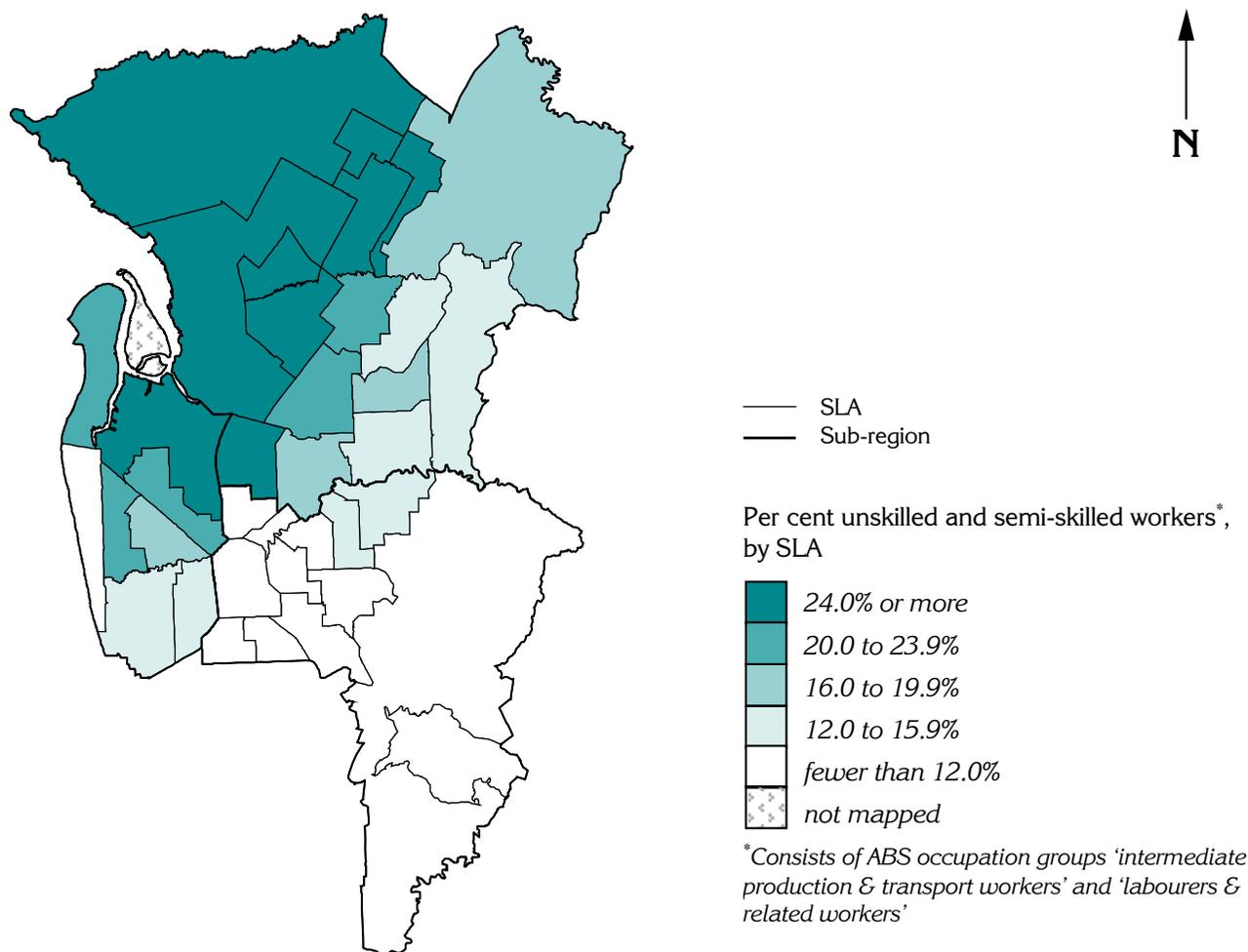


Table 13: Unskilled and semi-skilled workers, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	5,196	7.6
Quintile 2	8,634	12.6
Quintile 3	12,373	17.3
Quintile 4	12,172	21.6
Quintile 5: most disadvantaged areas	17,256	30.9
<b>Rate ratio</b>	..	<b>4.06**</b>
<b>Northern</b>	<b>30,862</b>	<b>22.9</b>
<b>Western</b>	<b>15,636</b>	<b>18.8</b>
<b>Central East</b>	<b>9,133</b>	<b>8.9</b>
<b>CNAHS</b>	<b>55,631</b>	<b>17.4</b>
<b>Southern</b>	<b>22,498</b>	<b>15.8</b>
<b>Metropolitan regions</b>	<b>78,129</b>	<b>16.9</b>
<b>State total</b>	<b>120,402</b>	<b>18.9</b>

\* indicates statistical significance: see page 19

# Labour force: Female labour force participation

Females 20 to 54 years in the labour force as a proportion of all females aged 20 to 54 years: data from the 2001 Census

## Overview

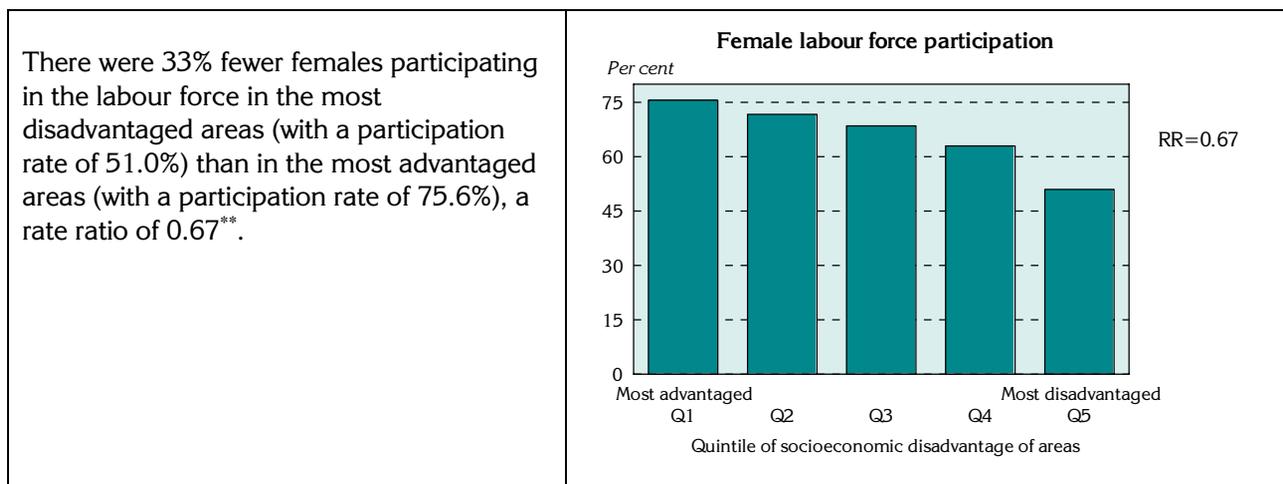
*The marked increase in women’s participation in paid work (at a time of decline in male participation) has been one of the most significant trends in Australian society over the last three decades. Women are both remaining in the work force longer (partly by delaying childbirth), and re-entering the workforce after childbirth, because of changes in social perceptions of the role of women and increased economic pressures on families.*

Approximately two thirds (65.8%, 123,130) of females aged 20 to 54 years in the Central Northern region were participating in the labour force (Table 14). The SLAs with the highest female labour force participation rates form a solid block to the east, south and south-east of the city, and stand in marked contrast to the lowest rates (Map 13). Local variations in female labour force participation have complex causes, and their implications for social health and for the provision of services such as child care are not straightforward. For example, high participation rates are not necessarily an indication of the need for child-care facilities; participation may be high partly because good services already exist, at least for better-off families. Low participation rates may indicate the existence of a welfare-dependent population, especially single mothers, for whom participation in low-paid employment has not been financially worthwhile.

The highest participation rates in this region were in Adelaide Hills - Ranges (77.3%), Unley - East (77.1%), Norwood Payneham St Peter’s - West (76.8%), Adelaide Hills - Central (76.3%), Burnside - North-East and Unley - West (both 75.9%), Burnside - South-West (75.5%) and Prospect (75.0%).

The largest number were located in Tea Tree Gully - South (5,597), Charles Sturt - Coastal (5,445), Tea Tree Gully - North (5,364), Salisbury - South-East (5,335), Tea Tree Gully - Central (5,019), Campbelltown - East (4,748) and Port Adelaide Enfield - Coast (4,658).

The lowest female labour force participation rate was in Playford - West Central (36.4%, 1,086), followed by - Elizabeth (39.2%, 2,149), Port Adelaide Enfield - Port (48.7%, 2,889), Salisbury - Inner North (53.2%, 3,409) and - Central (54.0%, 3,650), Port Adelaide Enfield - Inner (55.2%, 2,458), Salisbury Balance (55.7%, 792) and Playford - West (58.5%, 1,142).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 13: Female labour force participation, CNAHS, 2001

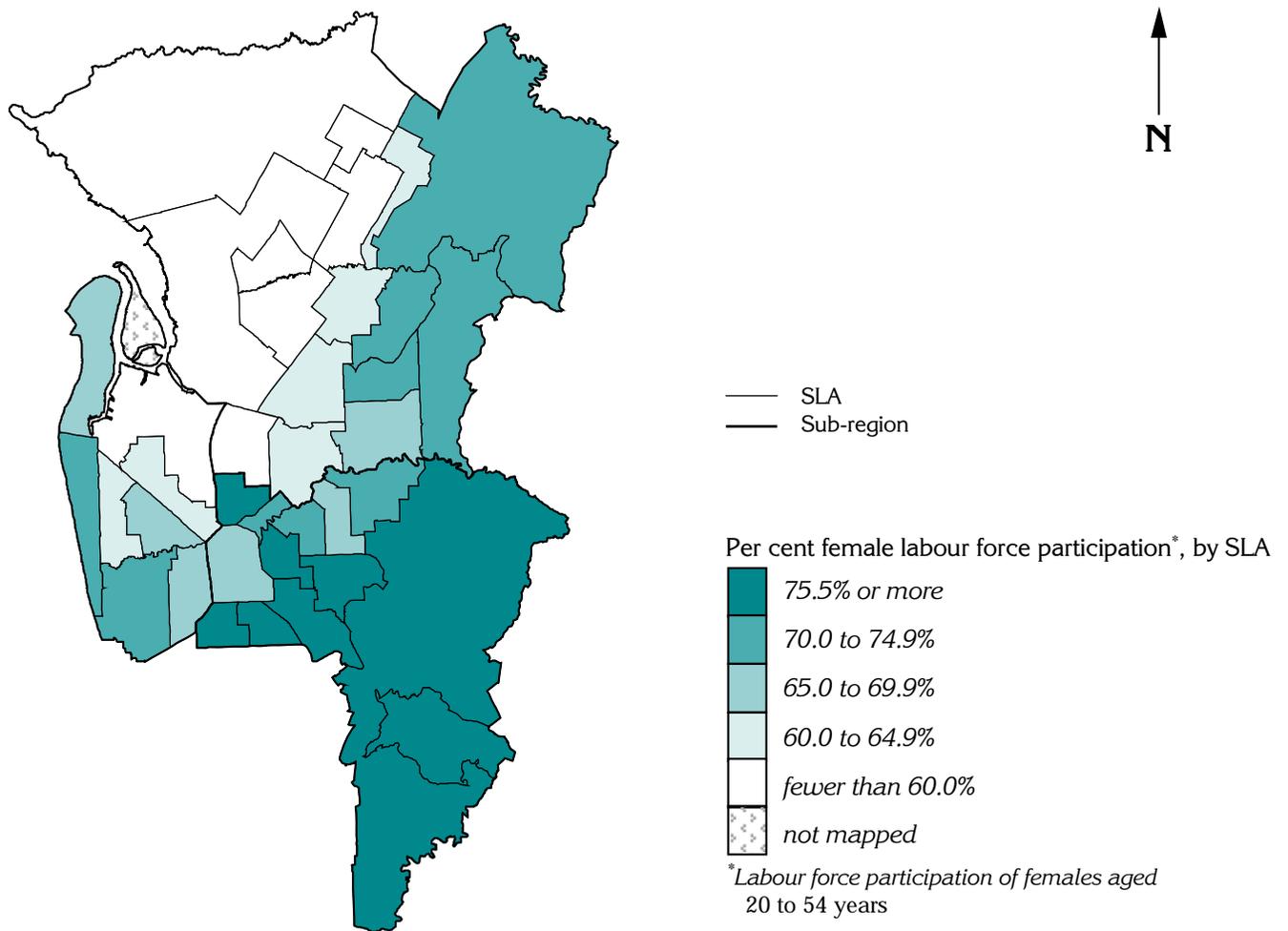


Table 14: Female labour force participation, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	27,036	75.6
Quintile 2	26,702	71.7
Quintile 3	27,784	68.5
Quintile 4	21,281	63.0
Quintile 5: most disadvantaged areas	20,327	51.0
<b>Rate ratio</b>	..	<b>0.67**</b>
<b>Northern</b>	<b>49,805</b>	<b>60.8</b>
<b>Western</b>	<b>32,510</b>	<b>65.0</b>
<b>Central East</b>	<b>40,815</b>	<b>73.9</b>
<b>CNAHS</b>	<b>123,130</b>	<b>65.8</b>
<b>Southern</b>	<b>54,541</b>	<b>68.6</b>
<b>Metropolitan regions</b>	<b>177,671</b>	<b>66.6</b>
<b>State total</b>	<b>238,979</b>	<b>66.3</b>

\* indicates statistical significance: see page 19

# Education: Educational participation at age 16

Participation of 16 year olds in full-time secondary education: data from the 2001 Census

## Overview

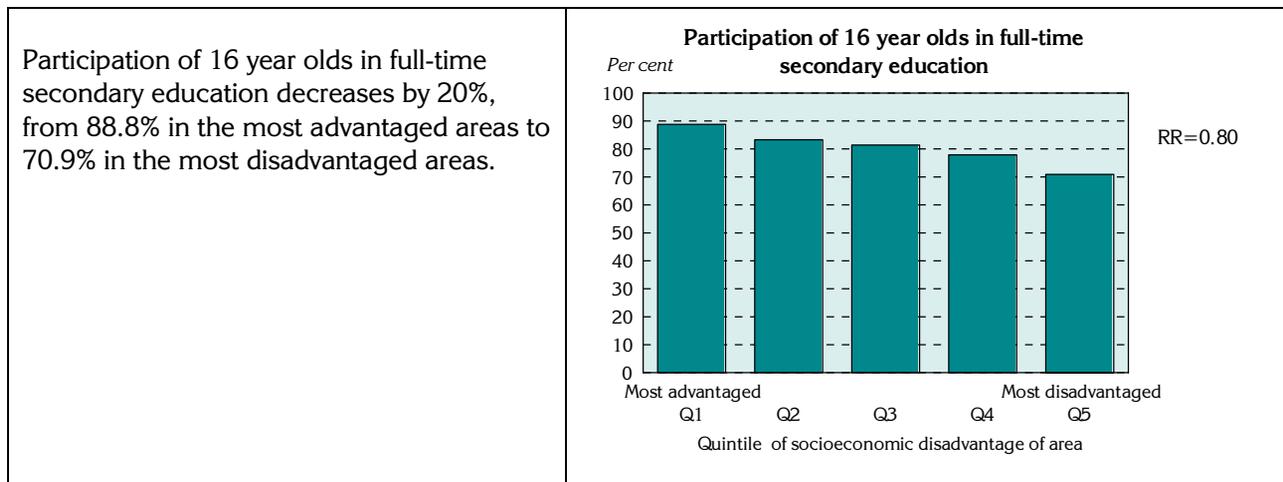
**Education increases opportunities for choice of occupation and for income and job security, and also equips people with the skills and ability to control many aspects of their lives – key factors that influence wellbeing throughout the life course. Young people completing Year 12 (and who would be still at school at age 16) are more likely to make a successful initial transition to further education, training and work than early leavers<sup>61</sup>. Participation in schooling is also a major protective factor across a range of risk factors, including substance misuse and homelessness.**

In 2001, 7,875 16 year olds were engaged in full-time secondary school education, 80.1% of 16 year olds (Table 15). Variations within the region in educational participation provide a striking illustration of the links between education, occupation and income, with the highest rates of full-time participation in secondary school education at age 16 strongly concentrated in the higher socioeconomic eastern, southern and south-eastern SLAs (Map 14).

The highest participation rates recorded in the region were in Unley - West (91.9%), Burnside - South-West (91.1%) and North-East (90.8%) and Adelaide Hills - Ranges (90.2%). There were also high proportions in Unley - East (89.8%), Walkerville (88.0%), Adelaide Hills - Central (87.9%), Norwood Payneham and St Peters - West (86.9%) and Campbelltown - East (86.2%).

In contrast, the lowest participation rates were in Playford - Elizabeth (60.6%), Playford - West Central (62.1%), Adelaide (65.5%), Salisbury - Inner North (71.6%), Salisbury - Central (72.6%), Port Adelaide Enfield - Port (73.6%), Port Adelaide Enfield - East (73.7%), Playford - West (74.2%) and Playford - East Central (74.7%).

The largest numbers of 16 year olds in full-time secondary school education were in Tea Tree Gully - South (402 students) and - North (392), Salisbury - South-East (340), Tea Tree Gully - Central (338), Salisbury - Inner North (315), Charles Sturt - Coastal (306) and Campbelltown - East (305).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 14: Participation of 16 year olds in full-time secondary education, CNAHS, 2001

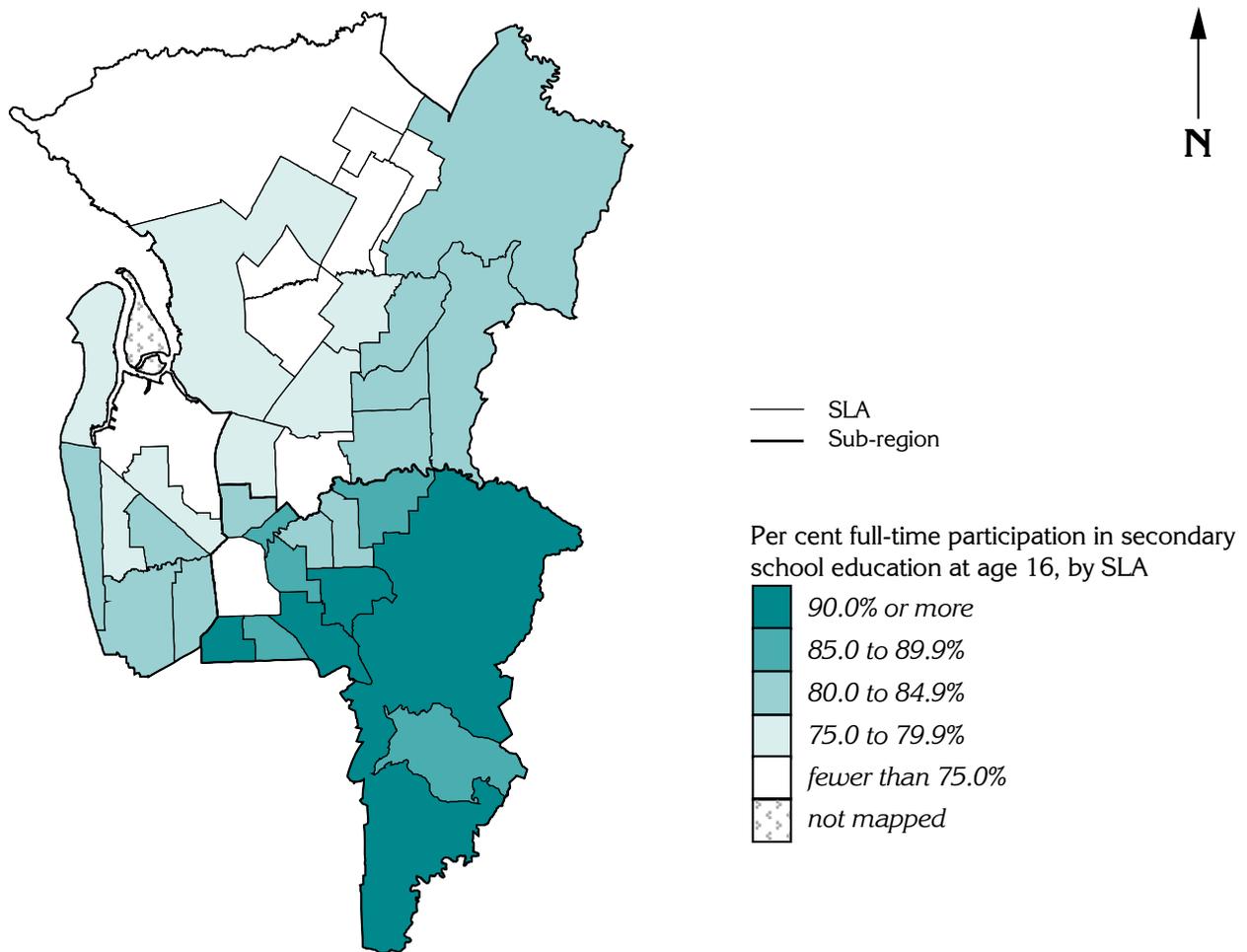


Table 15: Participation of 16 year olds in full-time secondary education, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,737	88.8
Quintile 2	1,559	83.3
Quintile 3	1,589	81.4
Quintile 4	1,313	77.9
Quintile 5: most disadvantaged areas	1,677	70.9
<b>Rate ratio</b>	..	<b>0.80**</b>
<b>Northern</b>	<b>3,666</b>	<b>76.0</b>
<b>Western</b>	<b>1,856</b>	<b>80.2</b>
<b>Central East</b>	<b>2,353</b>	<b>87.2</b>
<b>CNAHS</b>	<b>7,875</b>	<b>80.1</b>
<b>Southern</b>	<b>3,818</b>	<b>82.4</b>
<b>Metropolitan regions</b>	<b>11,693</b>	<b>80.8</b>
<b>State total</b>	<b>16,341</b>	<b>80.1</b>

\* indicates statistical significance: see page 19

# Access to technology: Use of the Internet at home

People who reported in the 2001 Census using the Internet at home in a one-week period

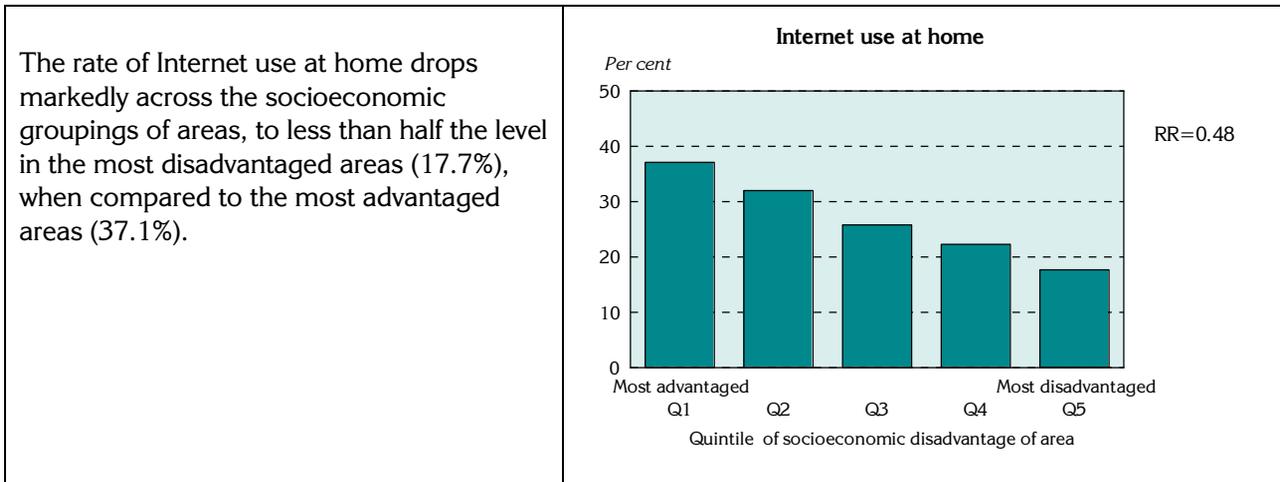
## Key points

**Home Internet access is increasingly becoming a valued part of life in Australia. However, access to this technology is not distributed equitably: this can lead to important disadvantages for young people at school, or adults wishing to undertake educational or personal development courses, or to use the Internet for commercial or recreational purposes**

One quarter of residents in Central Northern use the Internet at home (26.7%, 197,362 people) (Table 16). There was considerable variation at the SLA level in the proportion of people using the Internet at home. The highest use was in the city, and to the south, east and south- and north-east, with the lowest use in the north-west and outer north. This pattern demonstrates a greater use of the Internet at home among more advantaged population groups compared to disadvantaged groups (Map 15).

SLAs with the highest proportions of the population using the Internet in the region were Adelaide Hills - Ranges (40.0%, 3,979 people), Burnside - North-East (39.6%, 8,166), Burnside - South-West (39.4%, 8,005), Adelaide Hills - Central (39.3%, 4,961), Tea Tree Gully - North (36.2%, 9,284), Norwood, Payneham and St Peters - West (36.0%, 6,177), Playford - Hills, 35.8%, 1,011), Walkerville (35.6%, 2,412), Unley - West (35.3%, 5,757), Unley - East (35.3%, 6,656) and Adelaide (35.2%, 4,582).

The lowest rates of home Internet use in the metropolitan regions were also in the Central Northern region, in the SLAs of Port Adelaide Enfield - Port (14.3%, 3,541 people), Playford - Elizabeth (14.7%, 3,683), Playford - West Central (15.2%, 1,901), Salisbury - Central (19.0%, 5,119), Salisbury - Inner North (20.0%, 4,810), Charles Sturt - Inner West (20.8%, 4,988) Playford - West (21.0%, 1,698), Charles Sturt - North-East (21.0%, 5,251), Salisbury Balance (21.2%, 1,169) and Charles Sturt - Inner East (21.3%, 4,454).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 15: Use of the Internet at home, 2001

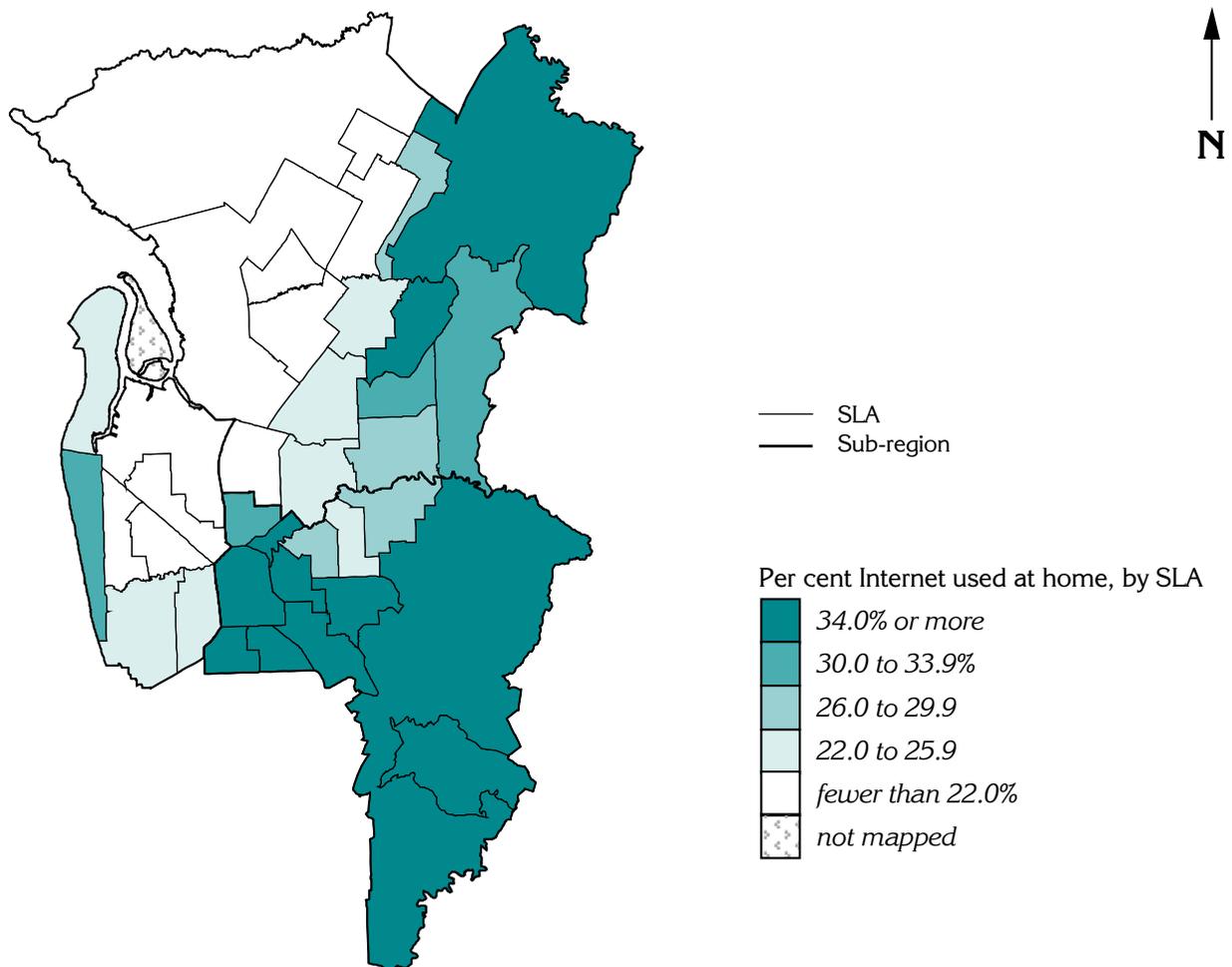


Table 16: Use of the Internet at home, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	51,137	37.1
Quintile 2	45,026	32.0
Quintile 3	42,110	25.8
Quintile 4	30,133	22.3
Quintile 5: most disadvantaged areas	28,956	17.7
<b>Rate ratio</b>	..	<b>0.48**</b>
<b>Northern</b>	<b>77,778</b>	<b>24.2</b>
<b>Western</b>	<b>46,609</b>	<b>22.9</b>
<b>Central East</b>	<b>72,975</b>	<b>34.0</b>
<b>CNAHS</b>	<b>197,362</b>	<b>26.7</b>
<b>Southern</b>	<b>95,263</b>	<b>30.1</b>
<b>Metropolitan regions</b>	<b>292,625</b>	<b>27.7</b>
<b>State total</b>	<b>375,349</b>	<b>25.6</b>

\* indicates statistical significance: see page 19

# Aboriginal and Torres Strait Islander people

People who identified in the 2001 Census as being of Aboriginal and/or Torres Strait Islander descent

## Overview

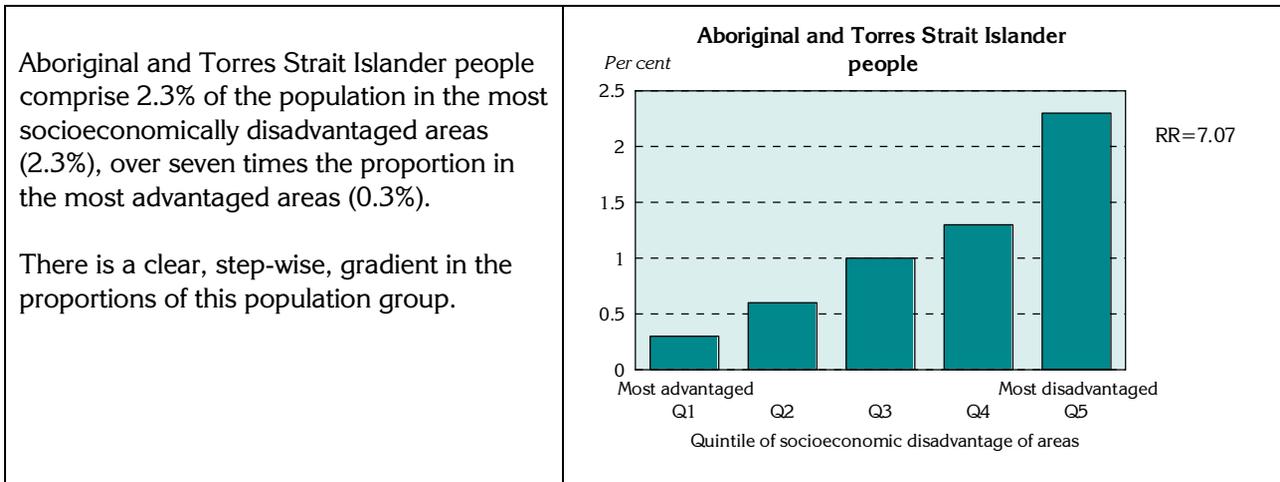
**Over one-third of the Aboriginal and Torres Strait Islander peoples living in South Australia reside in the Central Northern region (36.5%). The proportion of the total population identifying as Aboriginal and/or Torres Strait Islander in the 2001 Census represented 1.0% of the Metropolitan Adelaide population, and a higher 3.1% of those in country South Australia. There is a high annual percentage increase in this population group which largely reflects the increasing preparedness of people to identify themselves as Indigenous on the Census form. This change was most notable in Metropolitan Adelaide, with smaller (although still notable) changes being seen in country South Australia.**

In the Central Northern region 1.1% of the population identified as being of Aboriginal and/or Torres Strait Islander descent (8,439 people) (Table 17). The highest concentrations of Aboriginal people and Torres Strait Islanders were in the north-west and inner and outer northern SLAs, with very low proportions in eastern and south-eastern SLAs (Map 16).

The largest proportions of Indigenous usual residents were located in the SLAs of Playford - West Central (3.9%, 483 Indigenous people) and - Elizabeth (3.0%, 740), Port Adelaide Enfield - Port (2.5%, 624), - Inner (2.3%, 447), - Coast (1.9%, 539) and - East (1.9%, 505), Salisbury - Inner North (2.0%, 480), - Central (1.8%, 493) and - South-East (1.6%, 528) and Charles Sturt - North-East (1.9%, 481).

There were also relatively large numbers of Indigenous people in West Torrens - East (272, 1.2%), Tea Tree Gully - South (271, 0.8%), Charles Sturt - Inner East (252, 1.2%), Salisbury - North-East (232, 1.1%), Playford - East Central (216, 1.2%) and Charles Sturt - Inner West (216, 0.9%).

Small proportions of Indigenous peoples were mapped in the SLAs of Playford - Hills (0.2%, 6 people), Burnside - North-East (0.2%, 47) and - South-West (0.2%, 50), Unley - West (0.3%, 43), Walkerville (0.3%, 18), Campbelltown - East (0.3%, 77) and Norwood Payneham and St Peters - East (0.3%, 53).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 16: Aboriginal and Torres Strait Islander people, CNAHS, 2001

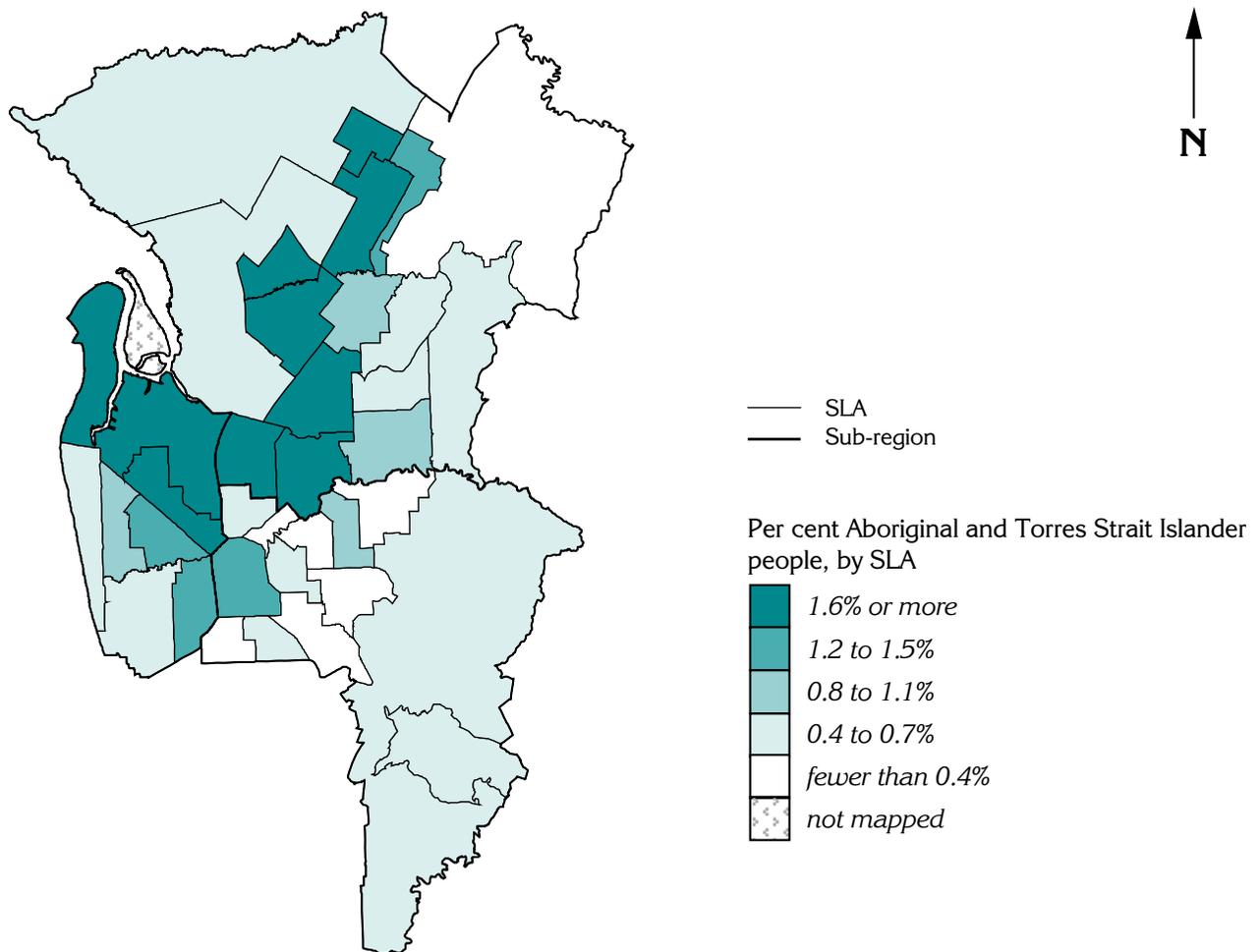


Table 17: Aboriginal and Torres Strait Islander people, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	450	0.3
Quintile 2	780	0.6
Quintile 3	1,646	1.0
Quintile 4	1,793	1.3
Quintile 5: most disadvantaged areas	3,770	2.3
<b>Rate ratio</b>	..	<b>7.07**</b>
<b>Northern</b>	<b>4,832</b>	<b>1.5</b>
<b>Western</b>	<b>2,692</b>	<b>1.3</b>
<b>Central East</b>	<b>915</b>	<b>0.4</b>
<b>CNAHS</b>	<b>8,439</b>	<b>1.1</b>
<b>Southern</b>	<b>2,202</b>	<b>0.7</b>
<b>Metropolitan regions</b>	<b>10,641</b>	<b>1.0</b>
<b>State total</b>	<b>23,114</b>	<b>1.6</b>

\* indicates statistical significance: see page 19

# People born in predominantly non-English speaking countries: Number resident in Australia for five years or more

People born in a predominantly non-English speaking country who have been resident in Australia for five years or more, as a proportion of the total population: data from the 2001 Census

## Overview

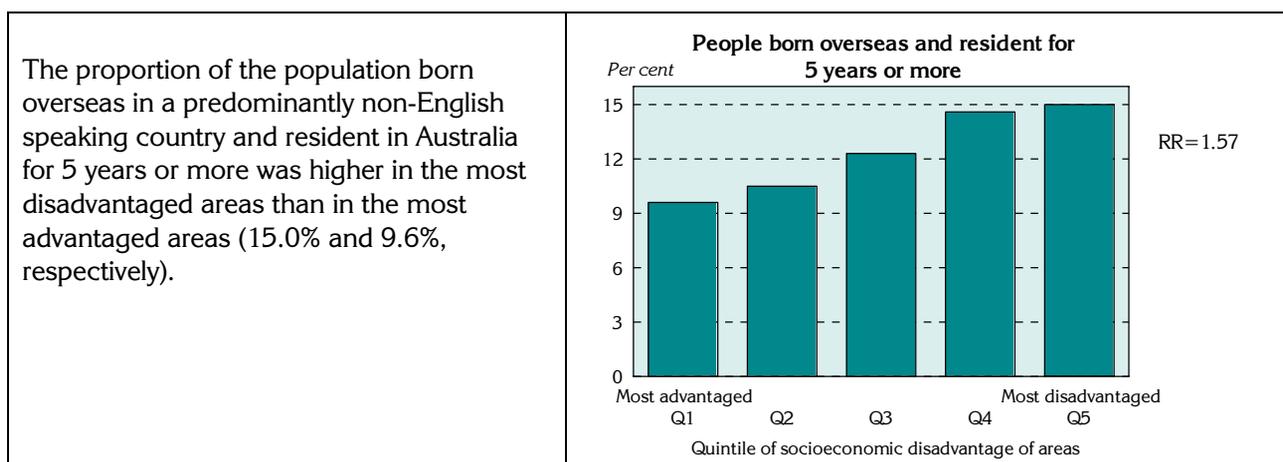
*Migrants in this category arrived in Australia from predominantly non-English speaking countries in or before 1996. Data are mapped for people born overseas in 'predominantly non-English speaking countries' include all but the following overseas countries, which are loosely designated as 'English-speaking': Canada, Hong Kong, Ireland, New Zealand, South Africa, United Kingdom and the United States of America. In the post-war period (in particular from the 1950s) the majority of immigrants from non-English speaking countries came from Europe; in recent years the proportion of these immigrants from Europe has declined. The most rapidly growing non-English speaking groups are now from Asia, including from countries such as China, India and Cambodia, and from Africa.*

Central Northern region had a large number of people born in non-English speaking countries and resident in Australia for five years or more, with 92,232 people, comprising 12.5% of the region's population (Table 18). As a substantial proportion of this population group will have been resident in Australia for many years, their distribution is often widespread; the ageing of the more established groups such as the Italian and Greek born, as well as the smaller numbers from Germany, the Netherlands, former Yugoslavia, Poland and the former USSR, pose special challenges for deliverers of health and welfare services. At the 2001 Census, the highest proportions of long-term residents born in non-English speaking countries were living in a group of SLAs adjacent to the west, north and north-west and north-east of the city (Map 17).

Port Adelaide Enfield - Port had almost one quarter of its residents in this category (25.0%), with other high proportions in Charles Sturt - North-East (21.0%), Charles Sturt - Inner West (20.9%), Campbelltown - West (20.5%), Campbelltown - East (19.6%), Charles Sturt - Inner East (17.9%), Salisbury Balance (17.4%), Norwood Payneham St Peters - East (17.2%), West Torrens - East (16.5%), Port Adelaide Enfield - Inner (15.8%) and Salisbury - Central (15.7%).

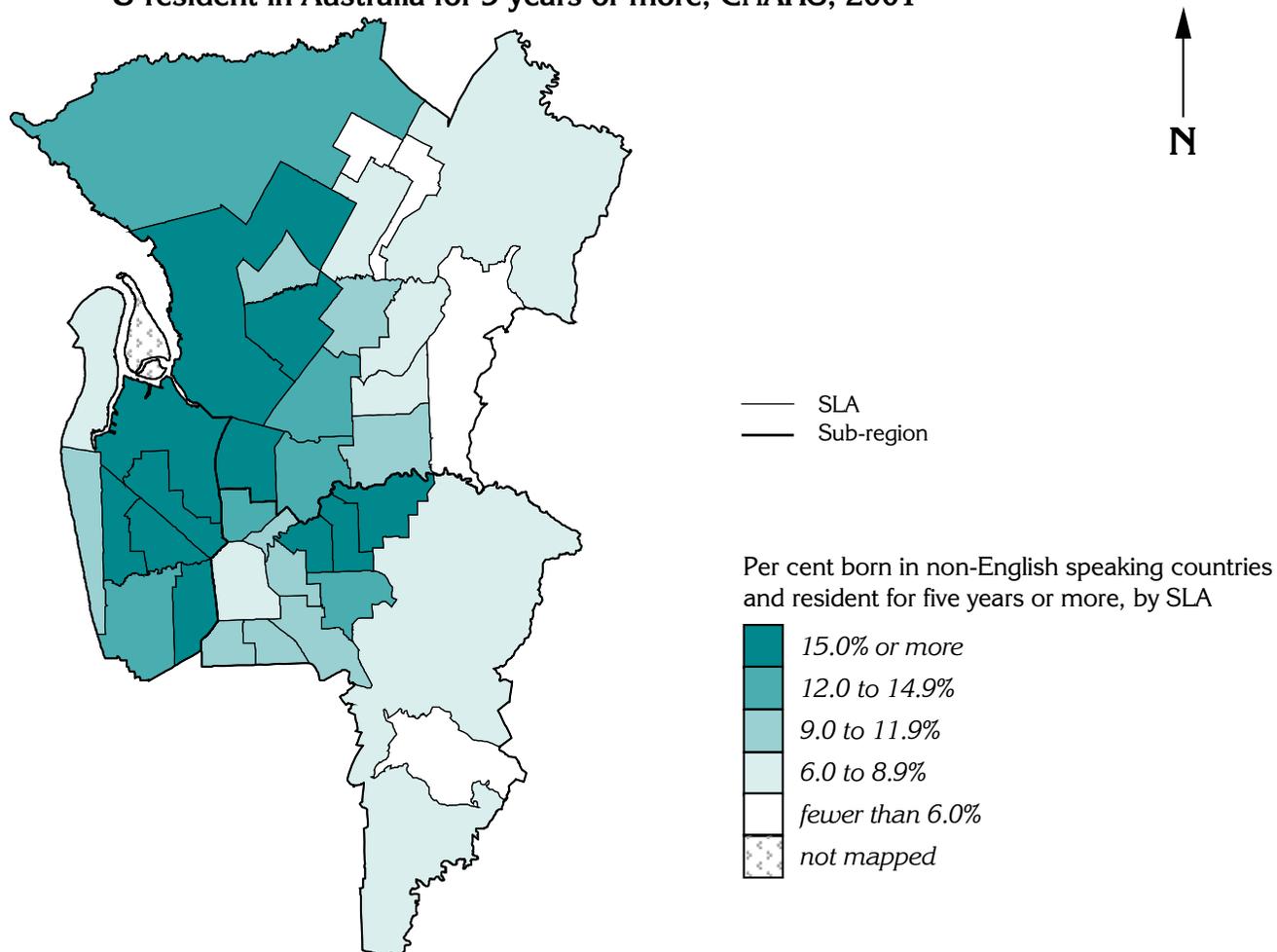
There were large numbers of people in this population group in Salisbury - South-East (4,269 people, 13.0%), West Torrens - West (3,577, 13.0%), Port Adelaide Enfield - East (3,533, 13.0%), Tea Tree Gully - South (3,525, 10.9%), Marion - Central (3,121, 9.7%) and Burnside - North-East (3,075, 14.9%).

The lowest proportions in the region were in the SLAs of Playford - East Central (4.7%), Playford - West Central (5.0%), Tea Tree Gully - Hills (5.2%), and Adelaide Hills - Central (5.6%).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

**Map 17: People born in predominantly non-English speaking countries & resident in Australia for 5 years or more, CNAHS, 2001**



**Table 18: People born in predominantly non-English speaking countries & resident in Australia for 5 years or more, CNAHS, 2001**

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	13,185	9.6
Quintile 2	14,815	10.5
Quintile 3	20,126	12.3
Quintile 4	19,637	14.6
Quintile 5: most disadvantaged areas	24,463	15.0
<b>Rate ratio</b>	..	<b>1.57**</b>
<b>Northern</b>	<b>32,557</b>	<b>10.1</b>
<b>Western</b>	<b>32,236</b>	<b>15.9</b>
<b>Central East</b>	<b>27,433</b>	<b>12.8</b>
<b>CNAHS</b>	<b>92,226</b>	<b>12.5</b>
<b>Southern</b>	<b>22,441</b>	<b>7.1</b>
<b>Metropolitan regions</b>	<b>114,673</b>	<b>10.9</b>
<b>State total</b>	<b>129,220</b>	<b>8.8</b>

\* indicates statistical significance: see page 19

# People born in predominately non-English speaking countries: Number resident in Australia for less than five years

People born in a predominantly non-English speaking country who have been resident in Australia for less than five years, as a proportion of the total population: data from the 2001 Census

## Overview

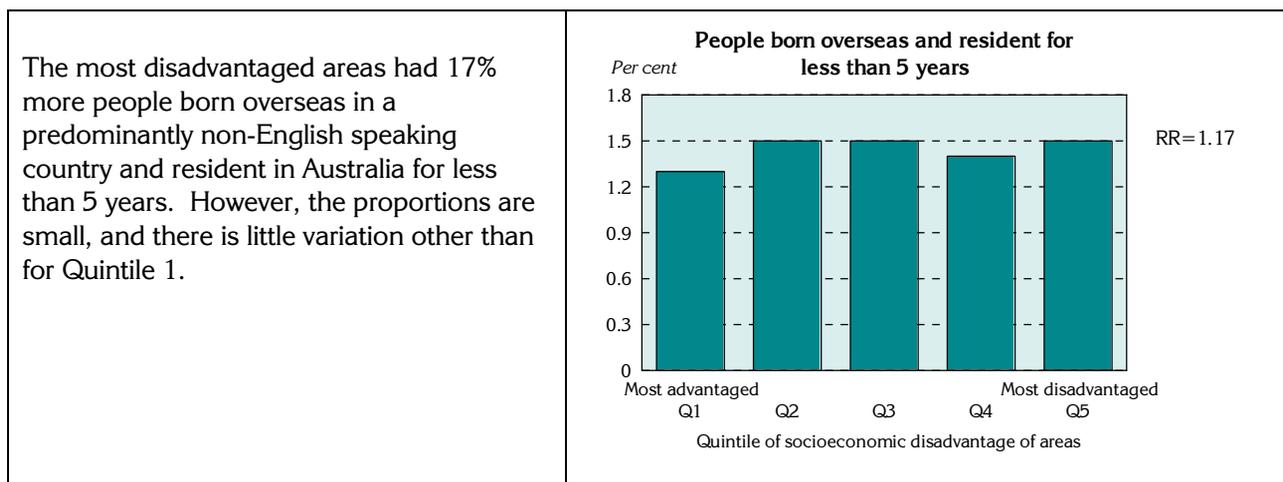
**Predominantly non-English speaking countries include all but the following overseas countries, which are loosely designated as ‘English-speaking’: Canada, Hong Kong, Ireland, New Zealand, South Africa, United Kingdom and the United States of America. People born in predominantly non-English speaking countries and who have been in Australia for less than five years (also referred to as short-term residents) can face a number of difficulties. For many, the combination of economic struggle with adjustment to a new language and a new cultural milieu can be expected to give rise to considerable stresses. Although a relatively small group, they also pose special challenges for deliverers of health and welfare services.**

Three quarters of South Australia’s population who are from a non-English speaking country, and resident for less than five years, live in the Central Northern region (74.5%). There are 10,535 people in this population group, 1.4% of the total population in the region (Table 19). The highest proportions of people in this population group lived in and around the city in the middle suburbs, in particular to the west, north-west and north, as well as in some eastern and south-eastern SLAs. The lowest proportions were recorded further away from the city to the north and in the Adelaide Hills (Map 18).

The City of Adelaide had the highest proportion of recently arrived migrants from predominantly non-English speaking countries, with 6.4% (828 people); other high proportions were found in the SLAs of West Torrens - East (3.8%, 866), Port Adelaide Enfield - Port (2.6%, 657), Charles Sturt - North-East (2.5%, 630), Port Adelaide Enfield - Inner (2.5%, 483), Charles Sturt - Inner East (2.3%, 473), West Torrens - West (2.0%, 549), Charles Sturt - Inner West (2.0%, 474), Campbelltown - West (1.9%, 362), Unley - East (1.9%, 359), Norwood Payneham and St Peters - West (1.9%, 319), Unley - West (1.8%, 287) and Salisbury Balance (1.8%, 98).

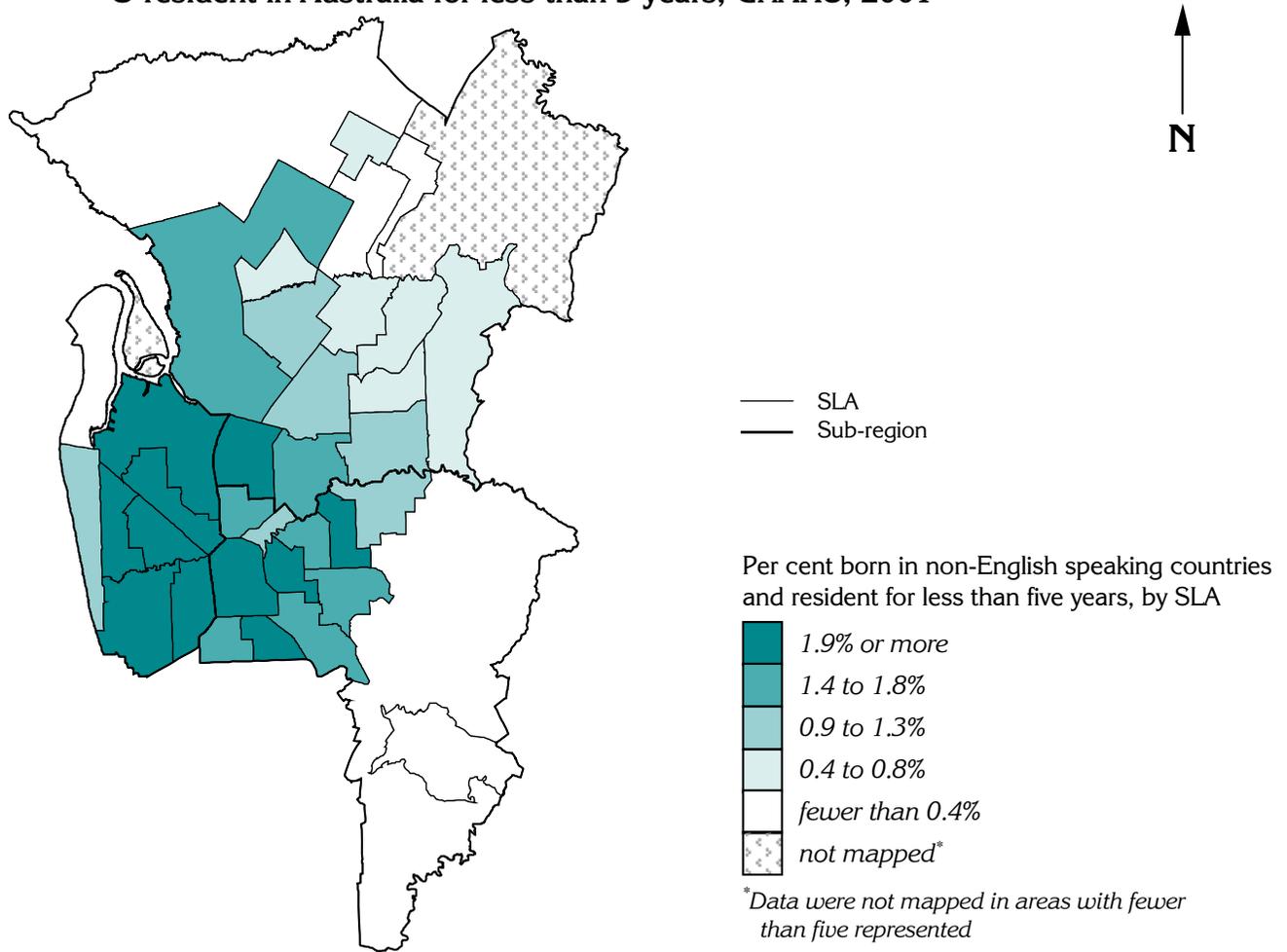
The largest numbers of people in this population group were located in Port Adelaide Enfield - East (416 people, 1.5%), Campbelltown - East (352, 1.3%), Salisbury - South-East (349, 1.1%) and - Central (341, 1.3%), Burnside - North-East (317, 1.5%), Charles Sturt - Coastal (317, 1.0%) and Prospect (307, 1.6%).

The SLAs with the lowest proportions of people in this category were Playford - East Central (0.2%, 28 people), followed by Playford - West (0.2%, 18), Playford - Elizabeth (0.3%, 66), Adelaide Hills - Central (0.3%, 40), Adelaide Hills - Ranges (0.3%, 32), Port Adelaide Enfield - Coast (0.3%, 90).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

**Map 18: People born in predominantly non-English speaking countries & resident in Australia for less than 5 years, CNAHS, 2001**



**Table 19: People born in predominantly non-English speaking countries & resident in Australia for less than 5 years, CNAHS, 2001**

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,771	1.3
Quintile 2	2,041	1.5
Quintile 3	2,432	1.5
Quintile 4	1,826	1.4
Quintile 5: most disadvantaged areas	2,465	1.5
<b>Rate ratio</b>	..	<b>1.17**</b>
<b>Northern</b>	<b>2,661</b>	<b>0.8</b>
<b>Western</b>	<b>4,056</b>	<b>2.0</b>
<b>Central East</b>	<b>3,818</b>	<b>1.8</b>
<b>CNAHS</b>	<b>10,535</b>	<b>1.4</b>
<b>Southern</b>	<b>2,731</b>	<b>0.9</b>
<b>Metropolitan regions</b>	<b>13,266</b>	<b>1.3</b>
<b>State total</b>	<b>14,146</b>	<b>1.0</b>

\* indicates statistical significance: see page 19

# People born in predominately non-English speaking countries: Poor proficiency in English

*People aged five years and over who were born in a predominantly non-English speaking country and reported at the 2001 Census that they spoke English 'not well', or 'not at all', as a proportion of the population aged five years and over*

## Overview

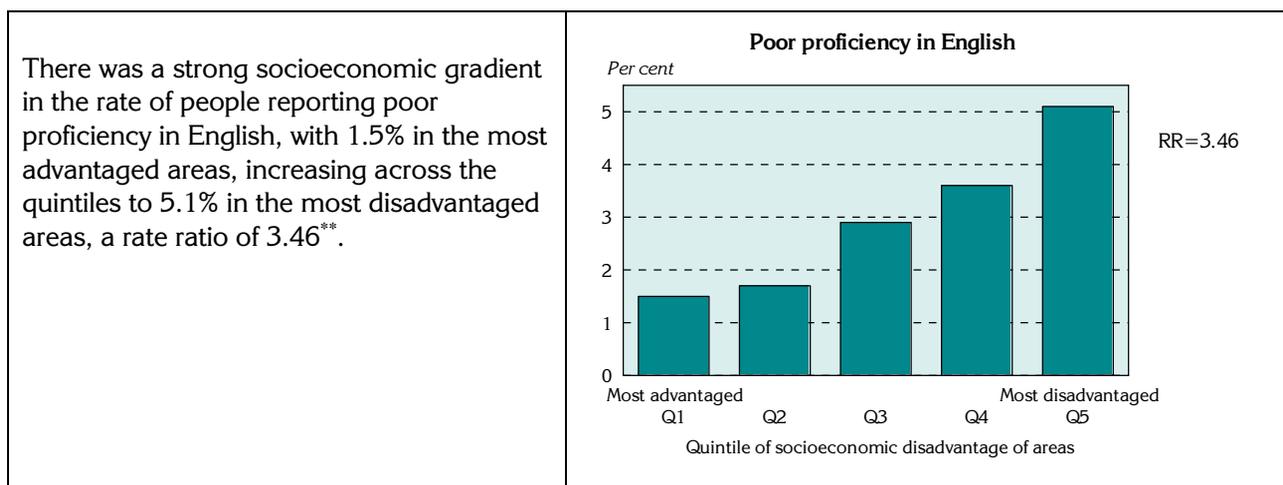
***For migrants from non-English speaking countries, the rate at which they adapt to live in the host country is directly related to the rate at which they achieve proficiency in English. Their level of proficiency in English has profound implications for the ease with which they are able to access labour markets, develop social networks, become aware of and utilise services, and participate in many aspects of Australian society. From a health service viewpoint, the location of this population group is most relevant in the provision of health services for women and older people, as many migrants from European countries who arrived in Australia in the 1950s and 1960s have not developed English language skills (especially females), or have returned to using the language of their birthplace as they have aged (both females and males).***

In 2001, there were 20,989 people living in the region with poor proficiency in English (3.0% of the total population) (Table 20). People with poor proficiency in English were mainly located in two groups of SLAs, the larger extending from west of the city to the north-west and to the outer north: the other is covers a number inner and middle SLAs to the north-east (Map 19).

The highest proportions of people reporting a poor proficiency in English were in Port Adelaide Enfield - Port (10.6%, 2,461 people), Charles Sturt - North-East (8.1%, 1,895), Salisbury Balance (6.8%, 342), West Torrens - East (6.0%, 1,302), Charles Sturt - Inner West (5.7%, 1,284), Charles Sturt - Inner East (5.3%, 1,055), Campbelltown - West (5.1%, 897), Salisbury - Central (5.0%, 1,259), Port Adelaide Enfield - Inner (4.9%, 883), Playford - West (4.6%, 350), Norwood Payneham St Peters - East (4.6%, 674), Campbelltown - East (3.8%, 957), West Torrens - West (3.2%, 828) and Norwood, Payneham and St Peters - West (3.0%, 495).

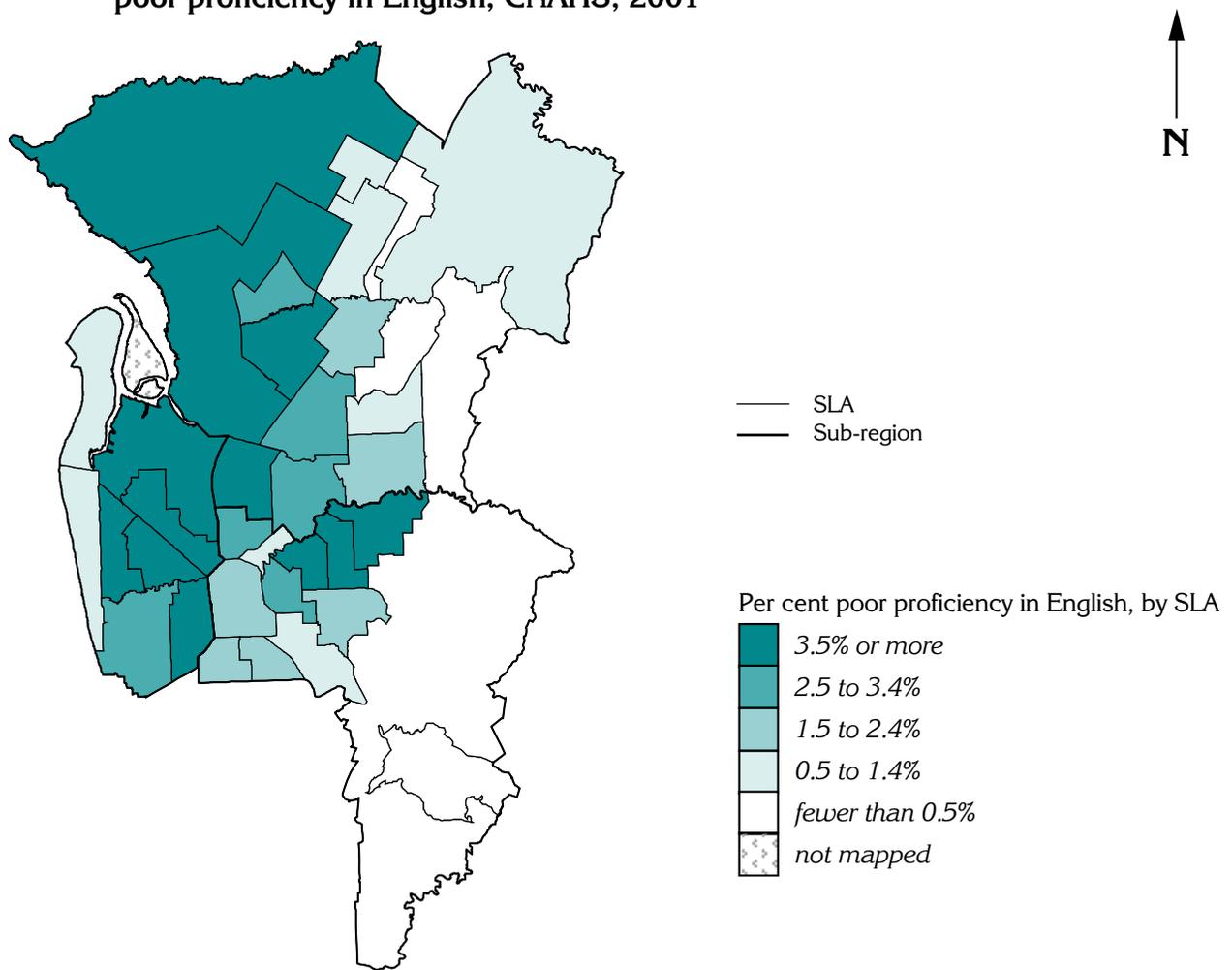
There were a further 849 people in Salisbury - South-East (2.8%), 828 in West Torrens - West (3.2%), 639 in Port Adelaide Enfield - East (2.5%) and 626 in Salisbury - Inner North (2.9%).

The SLAs with the lowest proportions of people with poor proficiency in English were Playford - East Central (0.3%), Tea Tree Gully - Hills (0.2%), and Adelaide Hills - Central (0.1%).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

**Map 19: People born in predominantly non-English speaking countries who reported poor proficiency in English, CNAHS, 2001**



**Table 20: People born in predominantly non-English speaking countries who reported poor proficiency in English, CNAHS, 2001**

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,948	1.5
Quintile 2	2,270	1.7
Quintile 3	4,471	2.9
Quintile 4	4,522	3.6
Quintile 5: most disadvantaged areas	7,778	5.1
<b>Rate ratio</b>	..	<b>3.46**</b>
<b>Northern</b>	<b>6,436</b>	<b>2.2</b>
<b>Western</b>	<b>9,380</b>	<b>4.9</b>
<b>Central East</b>	<b>5,173</b>	<b>2.5</b>
<b>CNAHS</b>	<b>20,989</b>	<b>3.0</b>
<b>Southern</b>	<b>2,456</b>	<b>0.8</b>
<b>Metropolitan regions</b>	<b>23,445</b>	<b>2.4</b>
<b>State total</b>	<b>24,883</b>	<b>1.8</b>

\* indicates statistical significance: see page 19

# Housing: Dwellings rented from the SA Housing Trust

*Dwellings rented from the SA Housing Trust as a proportion of all dwellings: data from the 2001 Census*

## Overview

*The distribution of public rental housing is an indicator of the distribution of single parents, those unemployed, aged or with a disability, and Aboriginal and Torres Strait Islander people, as these groups are given waiting list priority for public housing, which has become increasingly scarce since the 1970s.*

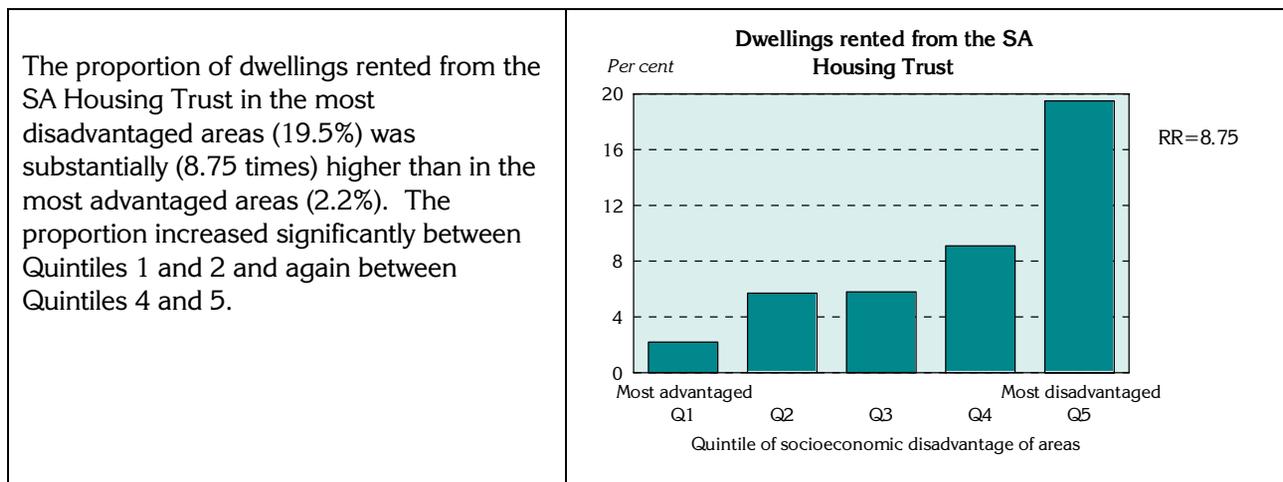
*A higher proportion of the housing stock is South Australian Housing Trust (SAHT) housing – 8.7 per cent compared with 7.7 per cent in the State as a whole and 8 per cent in Adelaide. The region contains some of the major concentrations of SAHT housing in the Adelaide Metropolitan Area. The reduced availability of state housing is reflected in the fact that the number of SAHT dwellings in the region declined from 31,745 in 1991 to 25,848 in 2001<sup>62</sup>.*

In 2001, 8.7% of housing in Central Northern was rented from the South Australian Housing Trust (25,848) (Table 21). The concentration of these dwellings in the north-west, inner north and outer northern SLAs reflects historical planning decisions and forms one of the most distinctive features of the region's social geography (Map 20).

The highest proportions of Housing Trust rental dwellings were in the SLAs of Playford - West Central (28.2%, 1,295 dwellings), Playford - Elizabeth (27.1%, 2,795), Port Adelaide Enfield - Port (26.7%, 2,835), Port Adelaide Enfield - Inner (20.4%, 1,737), Charles Sturt - North-East (14.8%, 1,551), Salisbury - Central (13.8%, 1,352), Salisbury - Inner North (12.4%, 1,038) and Port Adelaide Enfield East (11.6%, 1,323).

Large numbers were recorded in the SLAs of Port Adelaide Enfield - Coast (1,113, 9.7%), Charles Sturt - Inner West (1,065, 10.9%), Charles Sturt - Coastal (1,002, 7.8%), Salisbury - South-East (959, 7.6%), Tea Tree Gully - North (933, 10.4%).

The SLAs with the lowest proportions of Housing Trust rental dwellings were the Adelaide Hills - Central (0.1%, 6 dwellings), Tea Tree Gully - Hills (0.2%, 7), Burnside - North-East (0.6%, 47) and Burnside - South-West (1.5%, 125).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 20: Dwellings rented from the SA Housing Trust, CNAHS, 2001

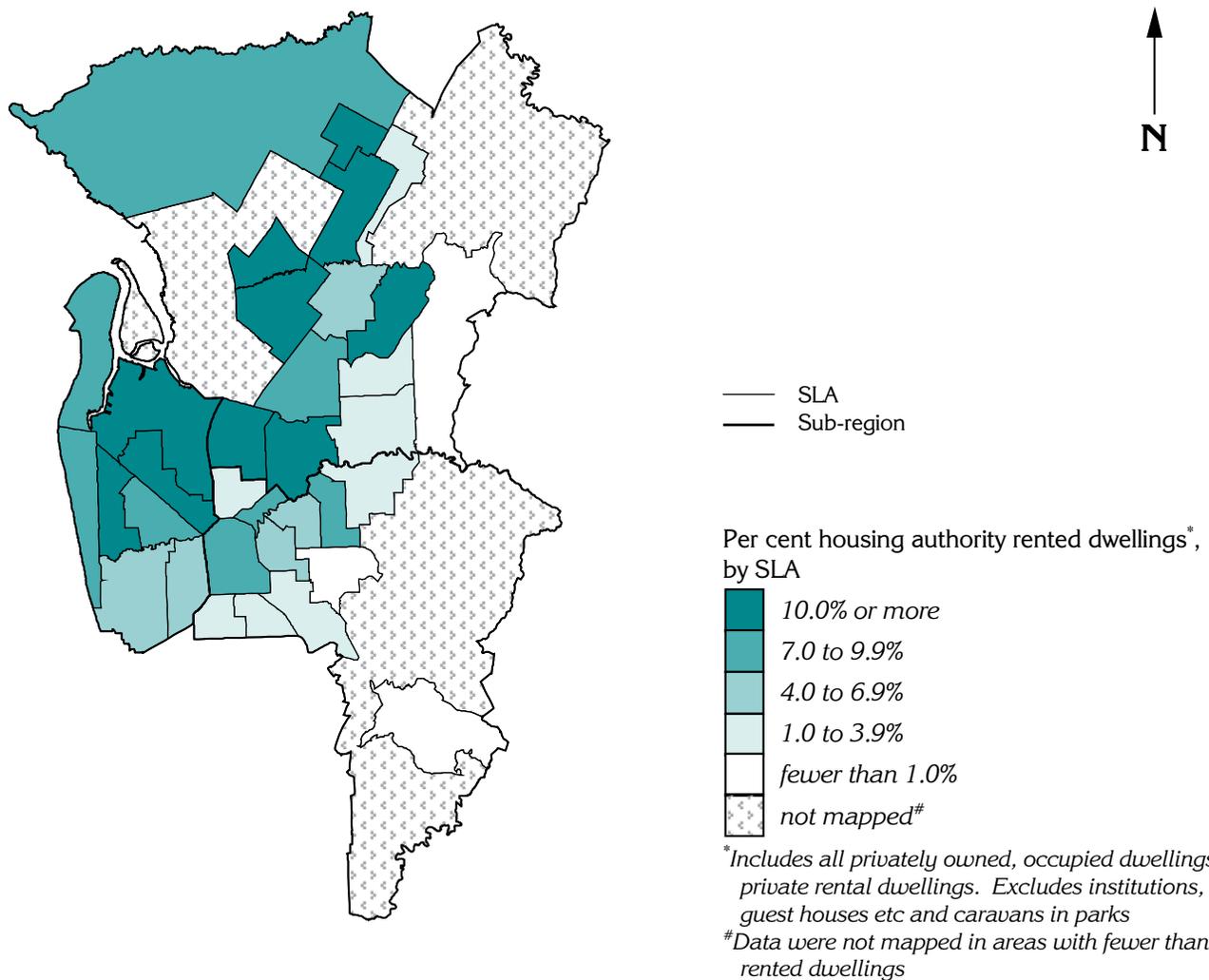


Table 21: Dwellings rented from the SA Housing Trust, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,250	2.2
Quintile 2	3,144	5.7
Quintile 3	3,973	5.8
Quintile 4	4,874	9.1
Quintile 5: most disadvantaged areas	12,607	19.5
<b>Rate ratio</b>	..	<b>8.75**</b>
Northern	12,891	10.7
Western	9,762	11.2
Central East	3,195	3.5
<b>CNAHS</b>	<b>25,848</b>	<b>8.7</b>
Southern	7,995	6.4
Metropolitan regions	33,843	8.0
State total	44,686	7.7

\* indicates statistical significance: see page 19

# Housing: Rent assistance

Households receiving rent assistance from Centrelink in 1999 to 2002, as a proportion of all households

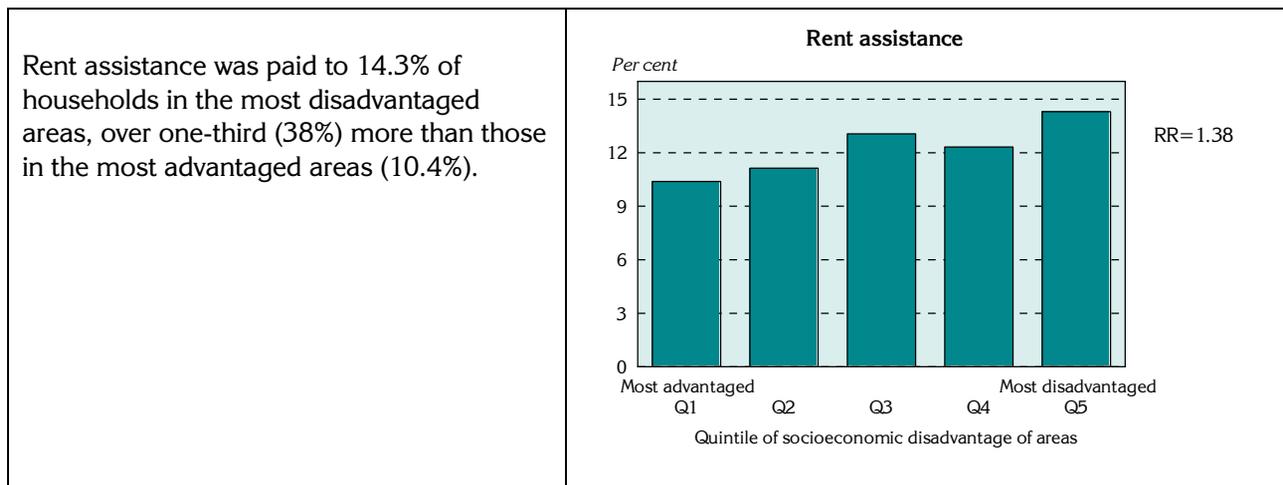
## Overview

*Affordable, secure and safe housing is fundamental to one’s health and wellbeing, employment, education and other life opportunities. The Australian Council of Social Service (ACOSS) estimated that more than one in three households could not afford to buy a house in Sydney, Melbourne or Adelaide; the poorest 40 per cent of households could not afford housing in those cities; and over 200,000 people were recorded on waiting lists for public housing across Australia<sup>62</sup>. The data mapped are of people receiving rent assistance from the federal Department of Family and Community Services, through Centrelink. They are referred to in the text as ‘renters’, and are shown as a proportion of households.*

There were 35,763 households receiving rent assistance in the Central Northern region (12.3% of households) (Table 22). The highest proportions of renters were located in and around the city centre and in the outer north; low proportions were mapped in SLAs to the east and south- and north-east (Map 21). This generally reflects the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

More than 15% of households in the City of Adelaide were receiving rent assistance (22.8% and 1,267 renters), with other high proportions in West Torrens - East (17.3%, 1,770), Port Adelaide Enfield - East (16.3%, 1,824 renters, the largest number at the SLA level), Salisbury - Inner North (15.3%, 1,306) and Charles Sturt - North-East (15.1%, 1,500), Playford - West Central (15.1%, 681) and Playford - Elizabeth (15.1%, 1,600).

At the other end of the scale, the lowest proportions of households receiving rent assistance were in Tea Tree Gully - North (5.4%, 485), Adelaide Hills - Central (6.2%, 273) and Tea Tree Gully - Hills (6.4%, 280).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 21: Rent assistance, CNAHS, 1999 to 2002

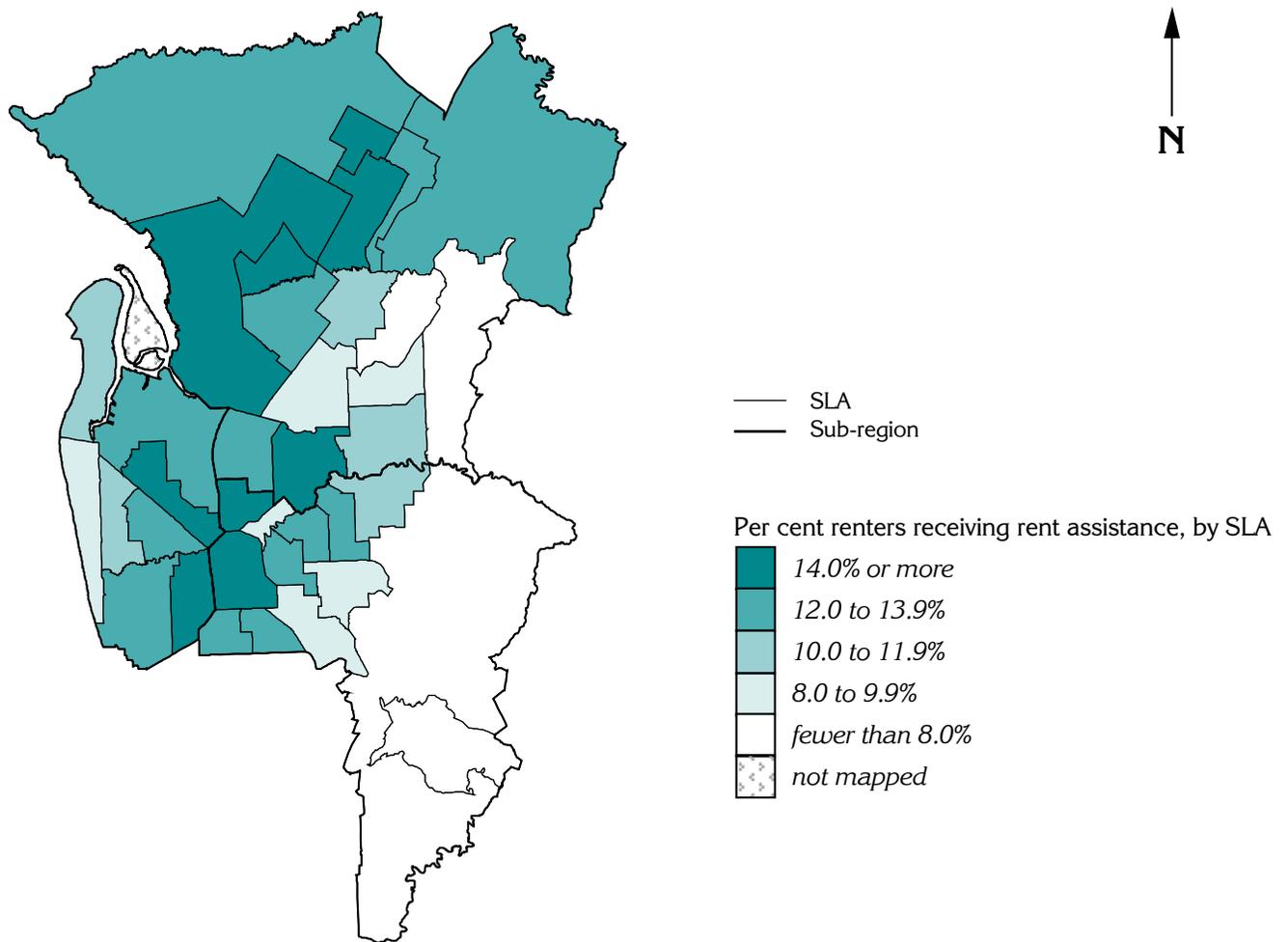


Table 22: Rent assistance, CNAHS, 1999 to 2002

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	5,662	10.4
Quintile 2	6,008	11.1
Quintile 3	8,628	13.1
Quintile 4	6,467	12.3
Quintile 5: most disadvantaged areas	8,997	14.3
<b>Rate ratio</b>	..	<b>1.38**</b>
<b>Northern</b>	<b>14,008</b>	<b>11.8</b>
<b>Western</b>	<b>11,117</b>	<b>13.1</b>
<b>Central East</b>	<b>10,639</b>	<b>12.2</b>
<b>CNAHS</b>	<b>35,763</b>	<b>12.3</b>
<b>Southern</b>	<b>13,600</b>	<b>11.1</b>
<b>Metropolitan regions</b>	<b>49,362</b>	<b>12.0</b>
<b>State total</b>	<b>64,563</b>	<b>11.4</b>

\* indicates statistical significance: see page 19

# Transport: Dwellings without a motor vehicle

*Dwellings with no motor vehicle garaged or parked on Census night 2001, as a proportion of all dwellings*

## Overview

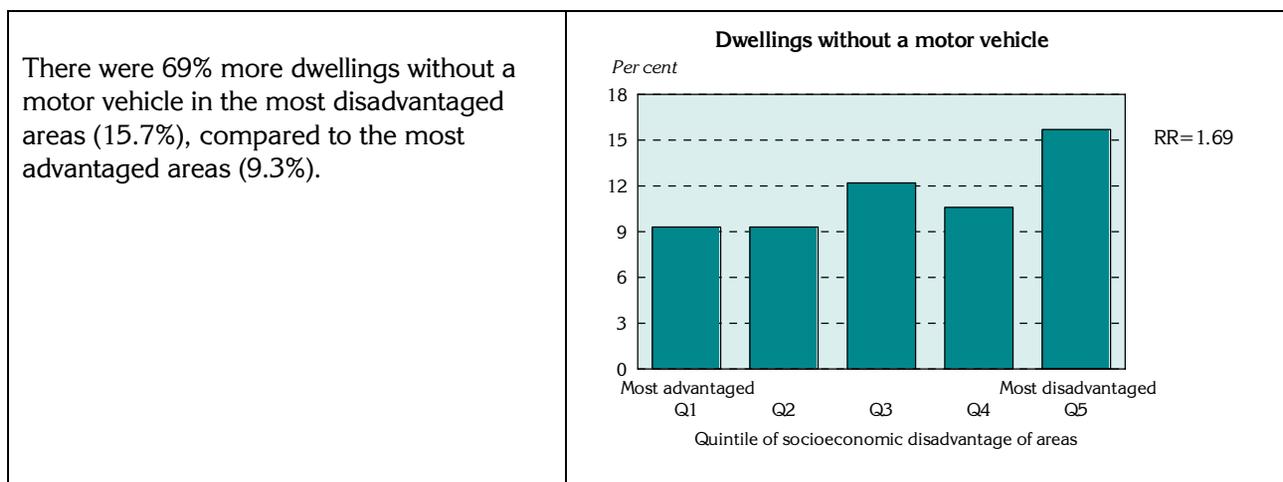
**People living in households without cars face many disadvantages in gaining access to jobs, services and recreation, especially if they are in low-density outer suburbia, or in other areas poorly served by public transport. It is also important whether they can afford to maintain a vehicle in reliable condition to meet their transport needs.**

Overall, 11.6% of dwellings in Central Northern did not have a motor vehicle parked or garaged on Census night (34,460 dwellings) (Table 23). Variations in car-ownership levels within the region are influenced by socioeconomic status, age structure, dwelling type and distance from the city centre. Areas with high proportions of dwellings without a motor vehicle predominate in the inner SLAs (in particular to the north-west, north and south of the city centre), and in the outer northern suburbs – that is, covering areas with older populations and areas with disadvantaged populations (Map 22). The lowest rates are in the outer eastern SLAs.

The highest proportion of dwellings without a motor vehicle was in the City of Adelaide (22.1%, 1,421 dwellings), where closeness to facilities and the availability of public transport make cars less of a necessity. However, this is not to deny that some of this group may desire a car but are unable to afford it. There were also high proportions in Port Adelaide Enfield - Port (20.7%, 2,205 dwellings), Playford - Elizabeth (19.9%, 2,054), Port Adelaide Enfield - Inner (18.2%, 1,551), West Torrens - East (16.9%, 1,827), Norwood Payneham and St Peters - East (16.7%, 1,183), Charles Sturt - North-East (16.4%, 1,723) and Playford - West Central (16.3%, 750).

The areas with the lowest proportions of these dwellings were Playford - Hills (1.1%), Adelaide Hills - Ranges (1.4%), Tea Tree Gully - Hills (3.3%), Onkaparinga - Hills (3.4%) and Adelaide Hills - Central (4.0%).

There were large numbers of dwellings without a motor vehicle in West Torrens - West (1,540 dwellings, 12.8%), Port Adelaide Enfield - Coast (1,414, 12.4%), Charles Sturt - Coastal (1,248, 9.7%), Charles Sturt - Inner West (1,246, 12.7%) and Salisbury - Central (1,080, 11.0%).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 22: Dwellings without a motor vehicle, CNAHS, 2001

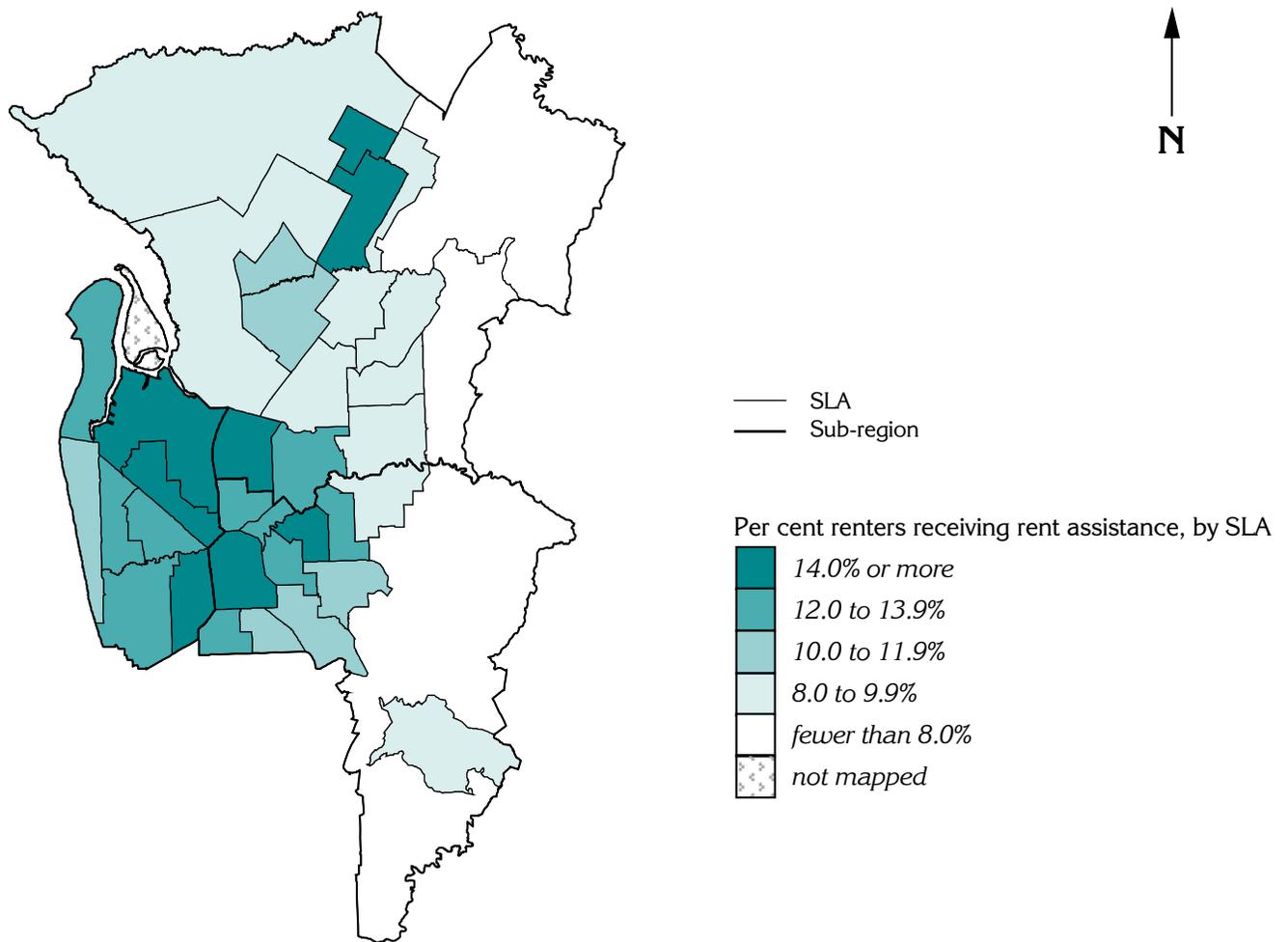


Table 23: Dwellings without a motor vehicle, CNAHS, 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	5,198	9.3
Quintile 2	5,177	9.3
Quintile 3	8,316	12.2
Quintile 4	5,665	10.6
Quintile 5: most disadvantaged areas	10,104	15.7
<b>Rate ratio</b>	..	<b>1.69**</b>
<b>Northern</b>	<b>11,627</b>	<b>9.6</b>
<b>Western</b>	<b>12,410</b>	<b>14.3</b>
<b>Central East</b>	<b>10,423</b>	<b>11.6</b>
<b>CNAHS</b>	<b>34,460</b>	<b>11.6</b>
<b>Southern</b>	<b>11,630</b>	<b>9.3</b>
<b>Metropolitan regions</b>	<b>46,090</b>	<b>10.9</b>
<b>State total</b>	<b>58,044</b>	<b>9.9</b>

\* indicates statistical significance: see page 19

# Socioeconomic disadvantage: Summary measure

ABS Index of Relative Socio-Economic Disadvantage (IRSD) – index numbers above 1000 indicate relative advantage and those below 1000 indicate relative disadvantage: data from the 2001 Census

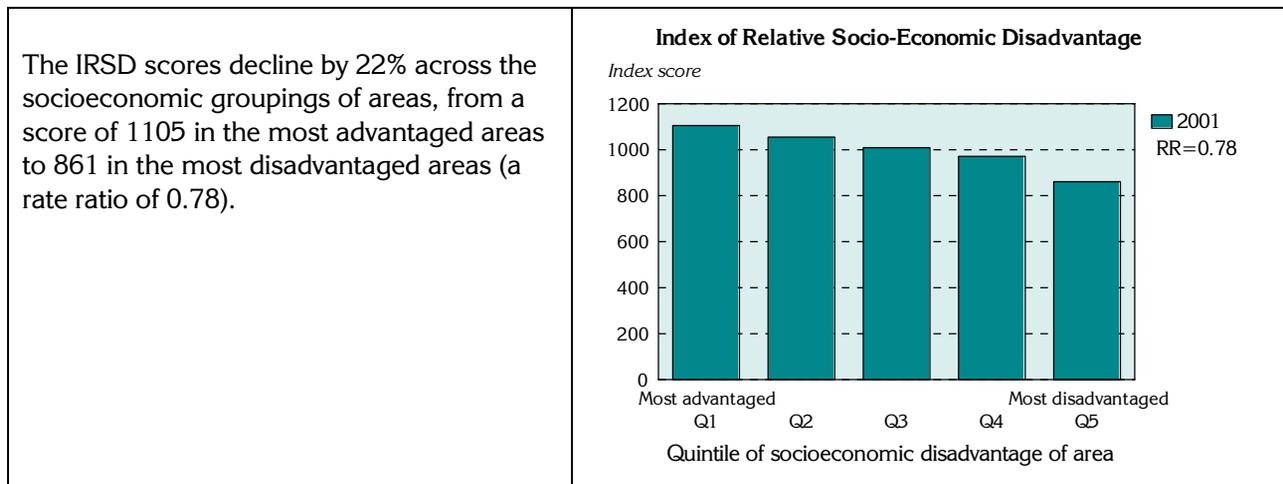
## Overview

*The Index of Relative Socioeconomic Disadvantage (IRSD) score provides a summary measure of the relative socioeconomic disadvantage of the population of an area in comparison with the average for South Australia as a whole. High index scores indicate least disadvantage and low index scores indicate greatest disadvantage. See page 18 for further details*

At the 2001 Census, the Index of Relative Socioeconomic Disadvantage (IRSD) for CNAHS was 996, marginally below the index score for the metropolitan regions of 1006 (Table 24). Despite an overall IRSD that is relatively close to average, there is considerable variation in the region with IRSD scores ranging from 762 to 1122 (Table 24). The areas with the lowest IRSD scores, and the highest levels of disadvantage, are located in a number of SLAs in the north-west, north and outer north of the region (Map 23, page 113).

The most disadvantaged SLAs in the region (and some of the most disadvantaged in the State) are Playford - West Central (with an index score of 762), Port Adelaide Enfield - Port (799) and Playford - Elizabeth (807). Other SLAs with IRSD scores below average included Port Adelaide Enfield - Inner (an index score of 886), Salisbury - Inner North (891), Salisbury - Central (897), Salisbury Balance (920), Charles Sturt - North-East (929) and Playford - West (948).

The areas with the highest IRSD scores (least disadvantaged) are located in the eastern suburbs and included Burnside - South-West (an index score of 1122), Adelaide Hills - Ranges (1120), Adelaide Hills - Central (1118), Burnside - North-East (1117), Walkerville (1114), Unley - East (1102), Unley - West (1091), Playford - Hills (1089), Norwood Payneham and St Peters - West (1083), Tea Tree Gully - Hills (1078), Adelaide (1072) and Prospect (1066).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 23: Index of Relative Socio-Economic Disadvantage, CNAHS, 2001

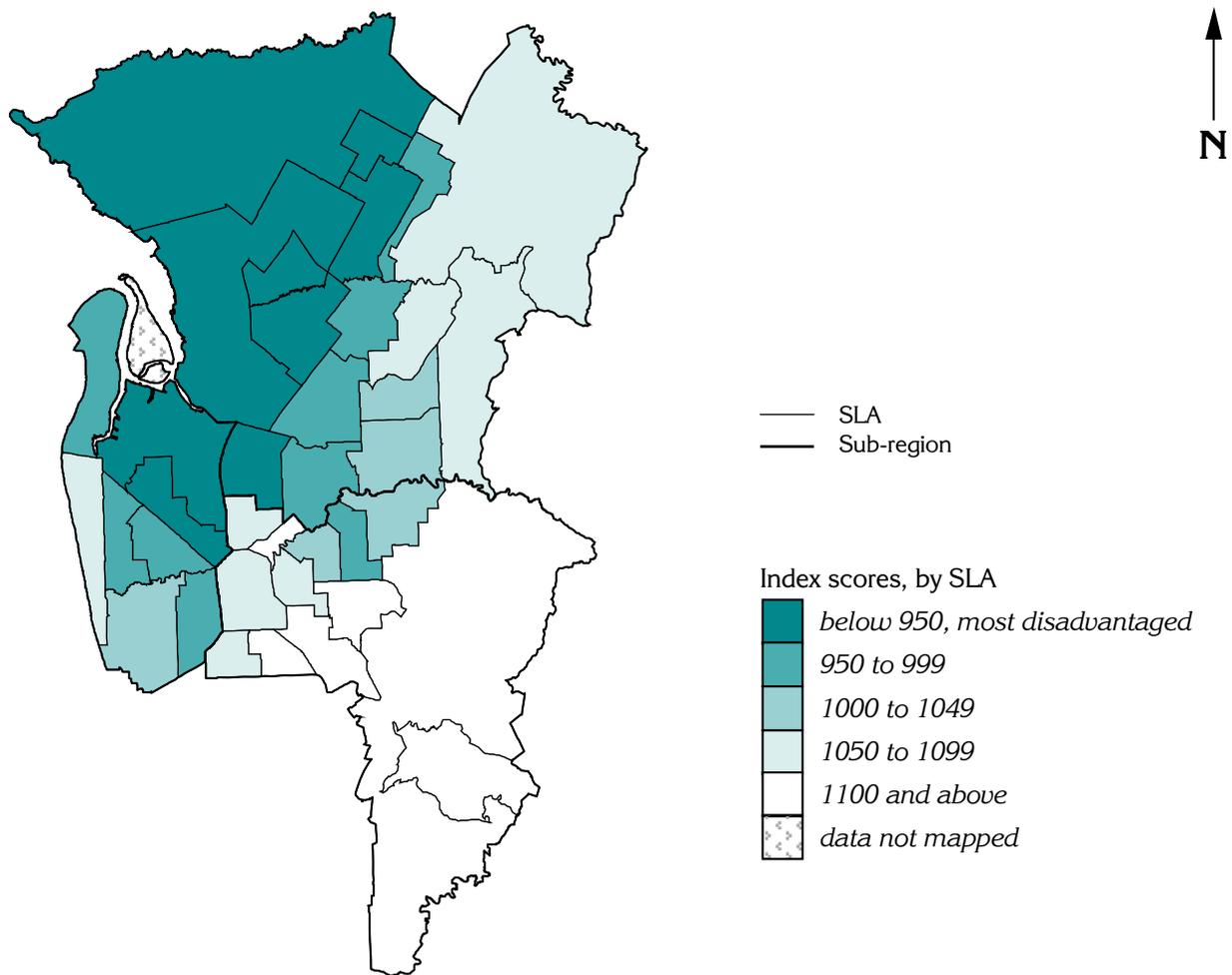


Table 24: Index of Relative Socio-Economic Disadvantage scores, CNAHS, 2001

Area	Population	Index scores	
		Average	Range*
<b>CNAHS</b>			
Quintile 1: most advantaged areas	137,719	1105	1078-1122
Quintile 2	140,547	1055	1046-1072
Quintile 3	163,136	1009	981-1037
Quintile 4	134,922	971	948-980
Quintile 5: most disadvantaged areas	163,166	861	762-929
<b>Ratio</b>	<b>..</b>	<b>0.78</b>	<b>..</b>
<b>Northern</b>	<b>321,428</b>	<b>959</b>	<b>762-1089</b>
<b>Western</b>	<b>203,181</b>	<b>967</b>	<b>799-1051</b>
<b>Central East</b>	<b>214,881</b>	<b>1079</b>	<b>999-1122</b>
<b>CNAHS</b>	<b>739,490</b>	<b>996</b>	<b>762-1122</b>
<b>Southern</b>	<b>316,372</b>	<b>1028</b>	<b>925-1116</b>
<b>Metropolitan regions</b>	<b>1,055,862</b>	<b>1006</b>	<b>762-1122</b>
<b>State total</b>	<b>1,467,244</b>	<b>1000</b>	<b>680-1122</b>

\*Range is the range in IRSD scores at the SLA level

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## INDICATORS: income support

Topic	Indicator	Page
Pension/benefit type:	Age pensioners	116
	Disability support pensioners	118
	Female sole parent pensioners	120
	People receiving unemployment benefits	122
	Children in welfare-dependent families	124

**Note:** In this section, some SLAs have proportions of over 100%. The reason for this is not clear, although it may occur in part because the data have been converted from postcode areas to SLAs.

# Income support: Age pensioners

Age pensioners as a proportion of the population of males aged 65 years and over and females aged 60 years and over: data at June 2004

## Overview

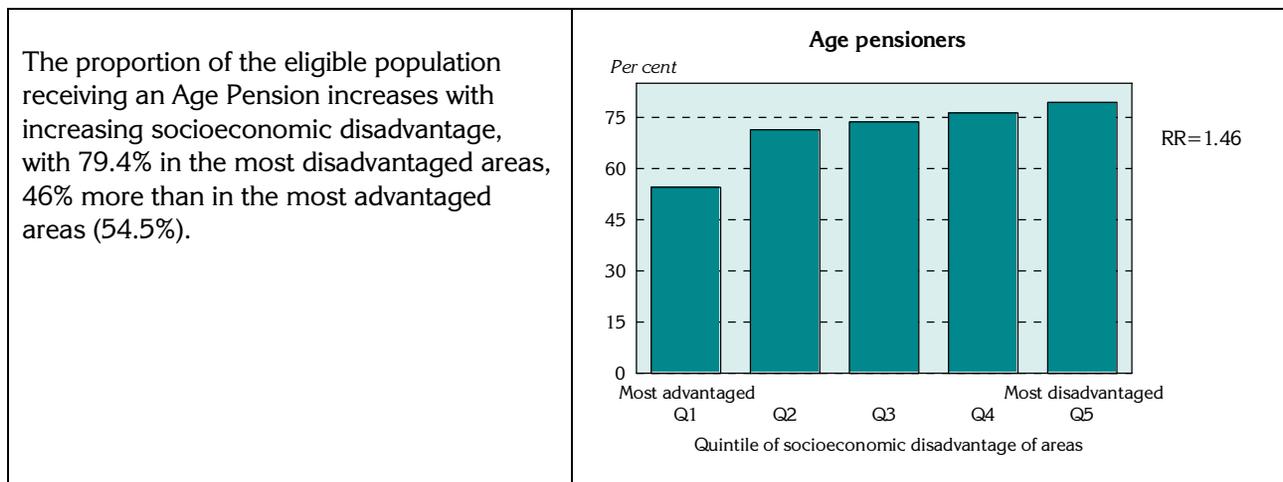
People eligible for an Age Pension from Centrelink comprise females aged 60 years and over and males aged 65 years and over: the Department of Veterans' Affairs (DVA) provides a service pension to eligible males at age 60 years and females at age 55 years. The data mapped are the sum of these pension types, referred to generally as age pensioners, expressed as a percentage of all females aged 60 years and over and all males aged 65 years and over at 30 June 2004.

In Central Northern region there were 94,181 people receiving an Age Pension, 71.3% of people in this age group (Table 25). The highest proportions were in a number of western, north-western and outer northern SLAs (Map 24).

Salisbury - Inner North, with 2,165 people on an Age Pension, had in excess of 100% (116.1% - see note on page 115). There were also high proportions in Playford - West Central (91.8%, 1,309), Tea Tree Gully - Central (88.4%, 2,821), Salisbury - South-East (83.9%, 4,212), Playford - East Central (83.8%, 1,449), Charles Sturt - North-East (82.3%, 3,867), West Torrens - East (81.5%, 3,653), Port Adelaide Enfield - Port (80.6%, 4,044), Playford - Elizabeth (80.4%, 4,118) and Port Adelaide Enfield - Coast (79.8%, 3,975).

Large numbers of people on Age Pensions were located in West Torrens - West (4,653 people, 65.0%), Charles Sturt - Coastal (4,504, 66.6%), Tea Tree Gully - South (4,318, 77.9%), Charles Sturt - Inner West (4,264, 75.7%) and Port Adelaide Enfield - East (4,162, 74.4%).

The SLAs with low proportions of people on an Age Pension were typically those of high relative socioeconomic status. These included Walkerville (43.3%, 722), Burnside - North-East (45.4%, 2,163) and - South-West (46.0%, 2,121), Adelaide (47.9%, 1,038), Adelaide Hills - Central (52.7%, 866), Salisbury Balance (57.1%, 346) and Unley - East (57.8%, 2,088).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 24: Age pensioners, CNAHS, June 2004

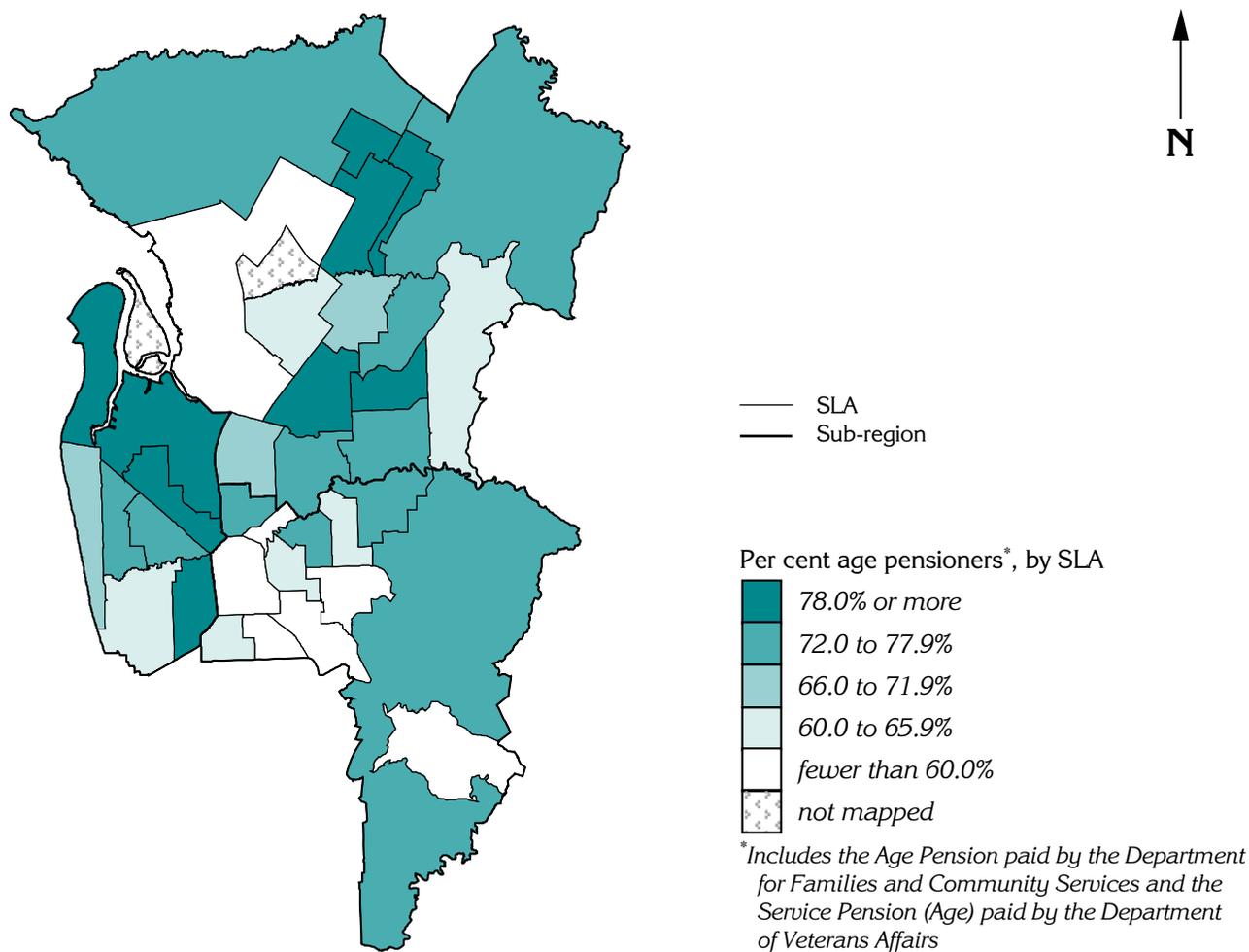


Table 25: Age pensioners, CNAHS, June 2004

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	13,808	54.5
Quintile 2	15,940	71.4
Quintile 3	24,202	73.7
Quintile 4	19,015	76.3
Quintile 5: most disadvantaged areas	21,216	79.4
<b>Rate ratio</b>	<b>..</b>	<b>1.46**</b>
<b>Northern</b>	<b>36,186</b>	<b>78.0</b>
<b>Western</b>	<b>32,526</b>	<b>74.9</b>
<b>Central East</b>	<b>25,468</b>	<b>60.2</b>
<b>CNAHS</b>	<b>94,181</b>	<b>71.3</b>
<b>Southern</b>	<b>39,083</b>	<b>68.1</b>
<b>Metropolitan regions</b>	<b>133,264</b>	<b>70.3</b>
<b>State total</b>	<b>184,744</b>	<b>70.1</b>

\* indicates statistical significance: see page 19

# Income support: Disability support pensioners

Recipients of the Disability Support Pension as a proportion of the population of males aged 15 to 64 years and females aged 15 to 54 years: data at June 2004

## Overview

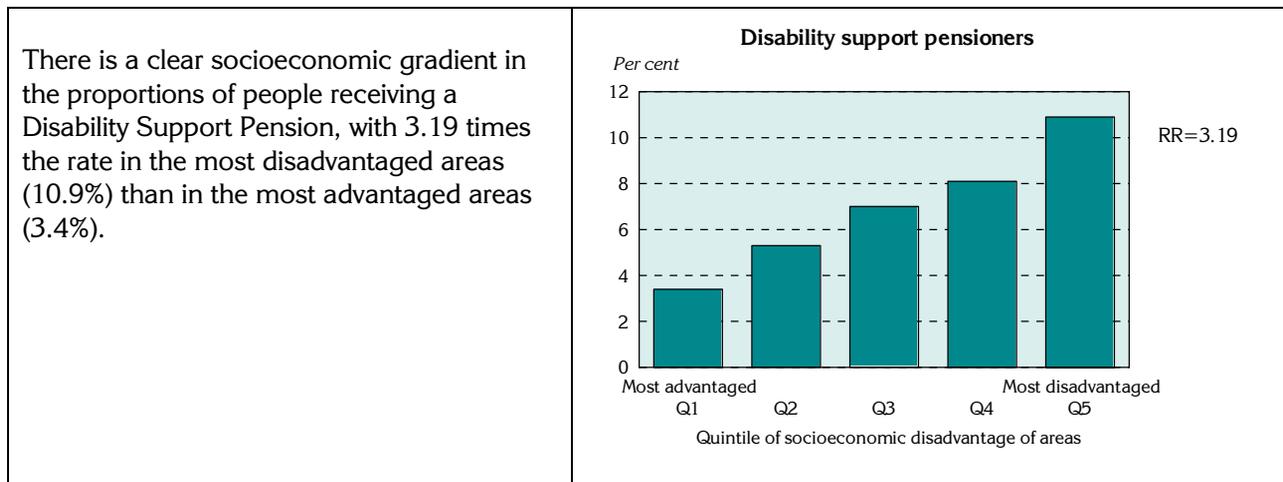
**People eligible for a Disability Support Pension (DSP), paid by Centrelink, must be aged 16 years or over and have not reached age-pensionable age; be permanently blind or have a physical, intellectual or psychiatric impairment level of 20 per cent or more and a continuing inability to work. Details of males under 65 years of age and females under 60 years of age receiving the DVA service pension (permanently incapacitated) have been combined with the DSP data: details on people above these ages are included in the data for Age Pensioners.**

Central Northern had a relatively high proportion of people receiving a DSP (7.0%, 35,328 people) (Table 26). The highest rates were mapped in a number of north-western and outer northern SLAs, with low proportions in the east (Map 25), following the pattern of socioeconomic disadvantage seen in Map 23, page 113.

Playford - Elizabeth had more than double the regional average, with 15.4% (2,271), as did Port Adelaide Enfield - Port (13.3%, 2,175) and - Inner (11.7%, 1,395). There were also high proportions in Playford - West Central (10.9%, 865), Charles Sturt - North-East (10.6%, 1,757), Salisbury - Central (9.1%, 1,655), Port Adelaide Enfield - East (8.9%, 1,735), Charles Sturt - Inner East (8.9%, 1,186) and - Inner West (8.8%, 1,339), Port Adelaide Enfield - Coast (8.7%, 1,591) and Salisbury - Inner North (8.6%, 1,466).

Tea Tree Gully - South (1,136, 5.2%), Salisbury - North-East (964, 6.6%) and Playford - East Central (915, 6.9%) had relatively large numbers of people receiving the DSP.

Adelaide Hills - Central (2.0%, 178) and - Ranges (2.2%, 156); Burnside - South-West (2.8%, 378) and - North-East (3.1%, 415); Tea Tree Gully - Hills (3.2%, 272) and Salisbury Balance (3.8%, 205) had low proportions.



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 25: Disability support pensioners, CNAHS, June 2004

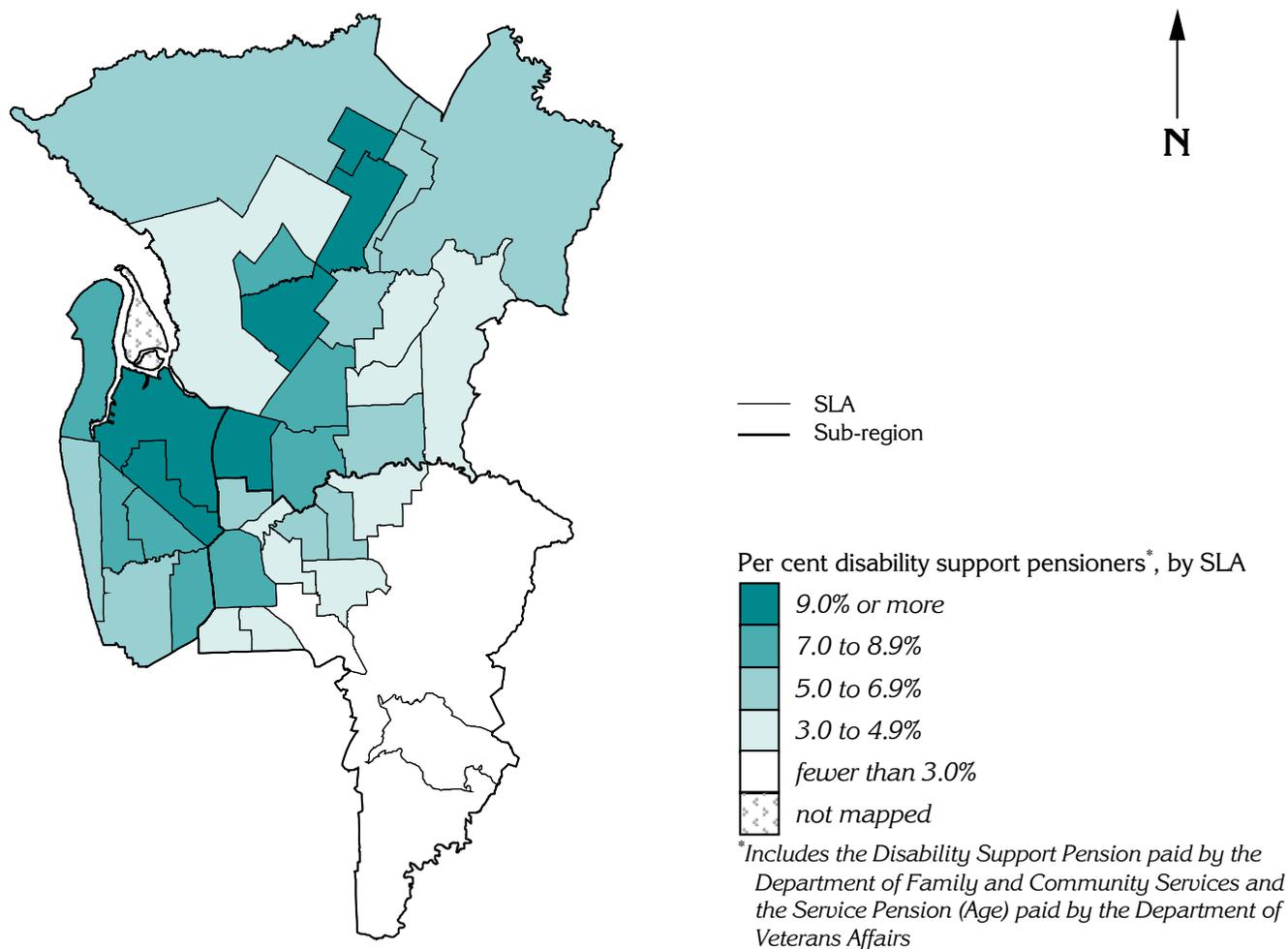


Table 26: Disability support pensioners, CNAHS, June 2004

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	3,233	3.4
Quintile 2	5,262	5.3
Quintile 3	7,602	7.0
Quintile 4	7,442	8.1
Quintile 5: most disadvantaged areas	11,789	10.9
<b>Rate ratio</b>	..	<b>3.19**</b>
<b>Northern</b>	<b>16,801</b>	<b>7.6</b>
<b>Western</b>	<b>11,718</b>	<b>8.8</b>
<b>Central East</b>	<b>6,809</b>	<b>4.6</b>
<b>CNAHS</b>	<b>35,328</b>	<b>7.0</b>
<b>Southern</b>	<b>12,945</b>	<b>6.1</b>
<b>Metropolitan regions</b>	<b>48,273</b>	<b>6.7</b>
<b>State total</b>	<b>66,172</b>	<b>6.7</b>

\* indicates statistical significance: see page 19

# Income support: Female sole parent pensioners

Female sole parents receiving a Parenting Payment Single, as a proportion of all females aged 15 to 54 years: data at June 2004

## Overview

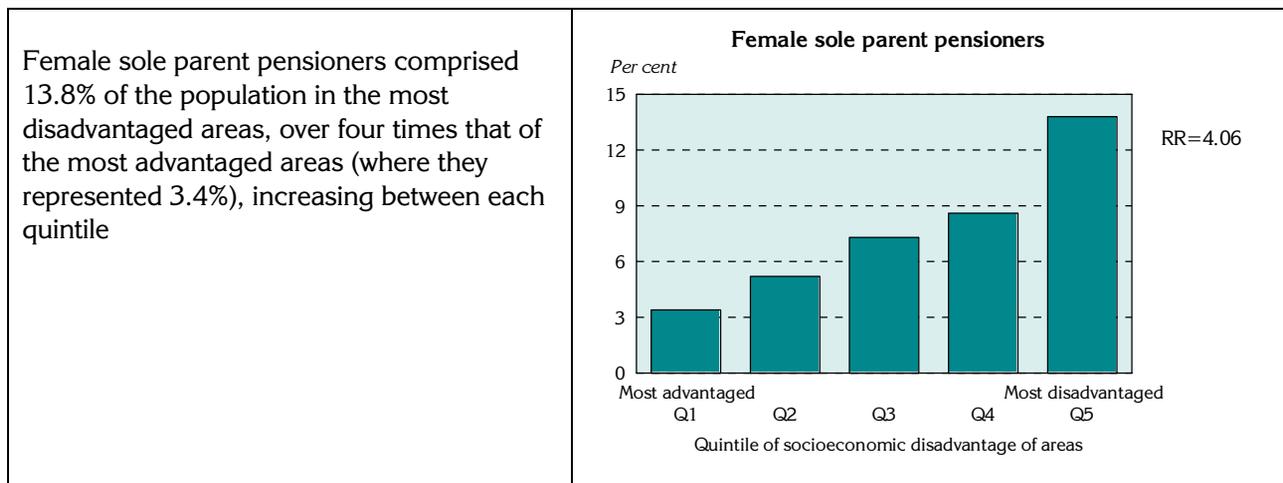
**People eligible for a Parenting Payment Single paid by Centrelink comprise female and male sole parents with at least one child under 16 years of age (who meet certain qualifications, or the child attracts a child disability allowance). Only female sole parent pensioners have been mapped because females comprise the majority of all sole parent pensioners (90.6% at 30 June 2004).**

In 2004 there were 17,112 female sole parent pensioners who were usual residents of the Central Northern region, 7.8% of females aged 15 to 54 years (Table 27). High proportions of female sole parent pensioners were found in a number of north-western and inner and outer northern SLAs, with low proportions in the city, and to the east and south-east (Map 26).

Playford - Elizabeth and Playford - West Central had the highest proportions, of 22.1% (1,422 females) and 18.6% (654), respectively. Other SLAs in this region to record rates well above the average were Salisbury - Central (13.6%, 1,090), Salisbury - Inner North (13.3%, 1,019) and Port Adelaide Enfield - Port (12.8%, 906).

The SLA of Adelaide had the lowest proportion for this variable, with only 2.0% of its female population aged from 15 to 54 years in this category (89 females). Proportions of below 3.0% were also recorded in Burnside - South-West (2.5%, 146 females), Walkerville (2.6%, 48), Unley - West (2.9%, 155) and Norwood Payneham St Peters - West (2.9%, 162).

Playford - Elizabeth had the largest number, with 1,422 female sole parent pensioners, followed by, Salisbury - Central (1,090), Salisbury - Inner North (1,019), Salisbury - South East (979) and Port Adelaide Enfield - Port (906).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 26: Female sole parent pensioners, CNAHS, June 2004

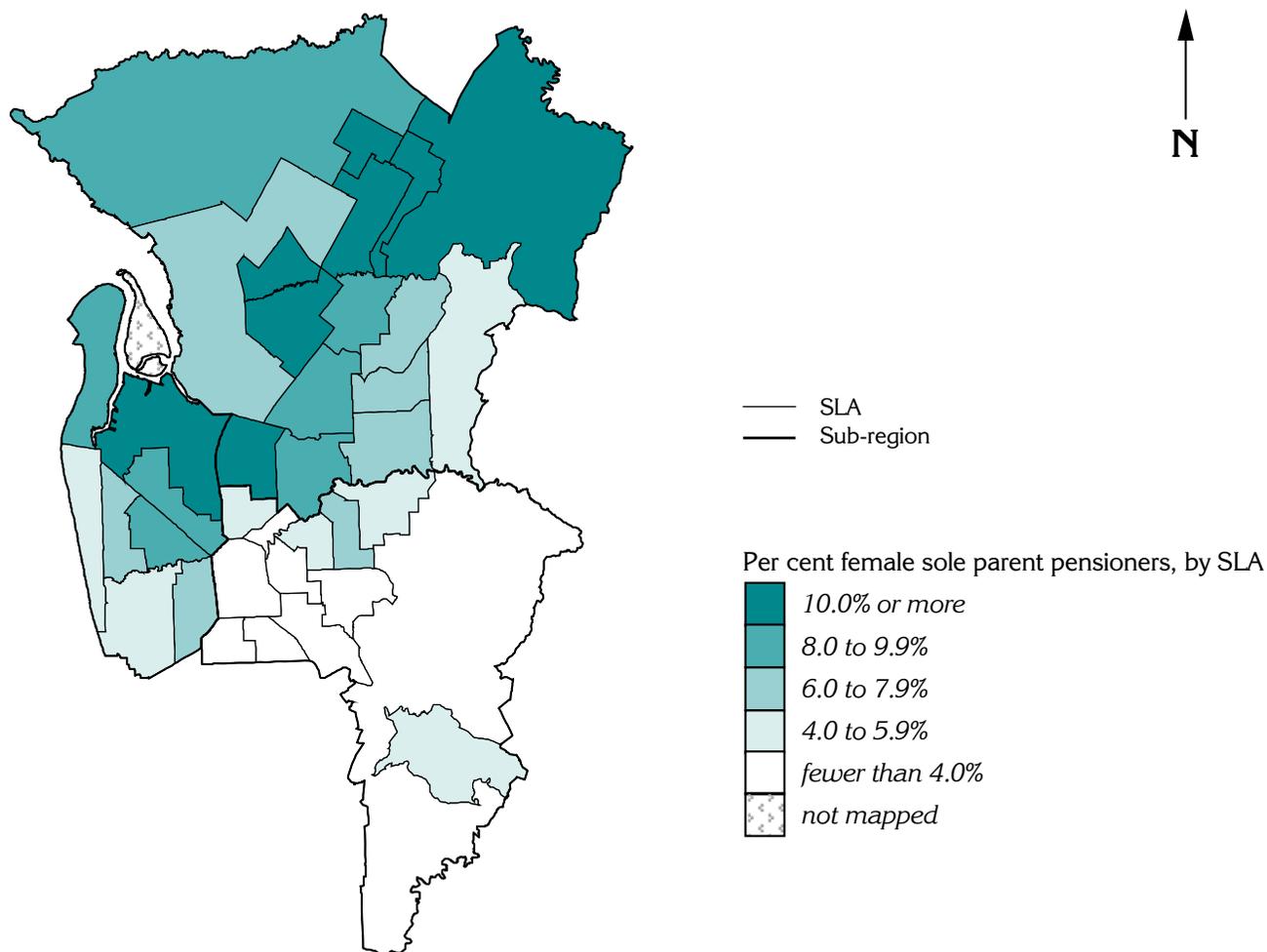


Table 27: Female sole parent pensioners, CNAHS, June 2004

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,419	3.4
Quintile 2	2,269	5.2
Quintile 3	3,437	7.3
Quintile 4	3,405	8.6
Quintile 5: most disadvantaged areas	6,581	13.8
<b>Rate ratio</b>	..	<b>4.06**</b>
<b>Northern</b>	<b>10,136</b>	<b>10.4</b>
<b>Western</b>	<b>4,529</b>	<b>7.9</b>
<b>Central East</b>	<b>2,447</b>	<b>3.8</b>
<b>CNAHS</b>	<b>17,112</b>	<b>7.8</b>
<b>Southern</b>	<b>6,694</b>	<b>7.2</b>
<b>Metropolitan regions</b>	<b>23,806</b>	<b>7.6</b>
<b>State total</b>	<b>32,050</b>	<b>7.6</b>

\* indicates statistical significance: see page 19

## Income support: People receiving an unemployment benefit

People receiving an unemployment benefit from Centrelink, as a proportion of the population of males aged 15 to 64 years and females aged 15 to 54 years (includes CDEP – see below): data at June 2004

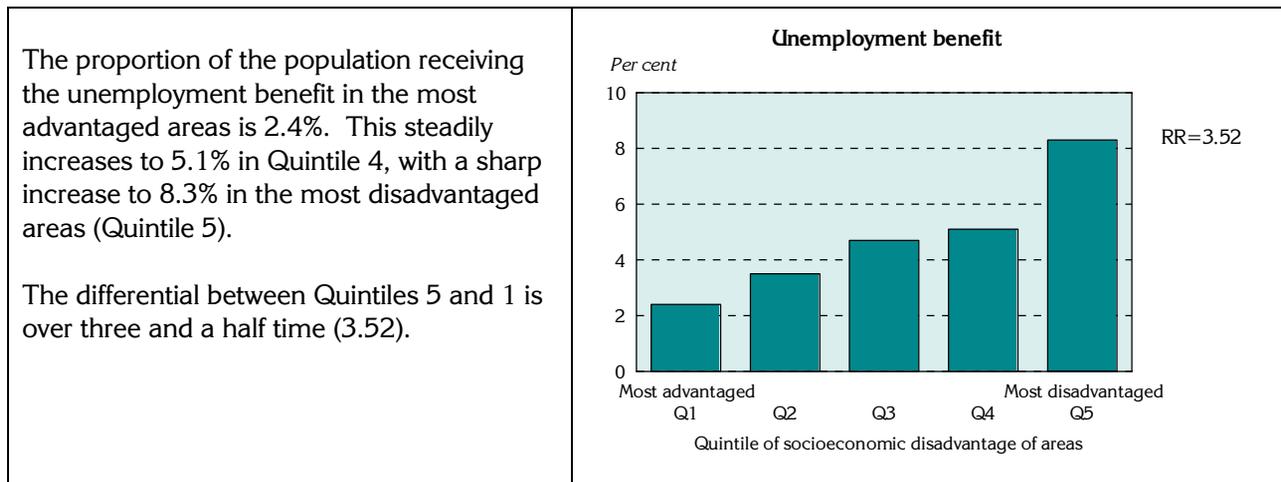
### Overview

People receiving an unemployment benefit are shown as a percentage of the eligible population (of males aged 15 to 64 years and females aged 15 to 59 years). The data mapped are the proportion of the population receiving 'unemployment benefits': they include the Youth Training Allowance and Newstart Allowance paid by Centrelink and people participating in the Community Development Employment Program (CDEP) schemes in 2003#.

There were 24,489 people in the Central Northern region in receipt of an unemployment benefit, 4.9% of the eligible population (Table 28). The SLAs with the highest proportions of people receiving an unemployment benefit were located in two distinct areas, one in the outer north and the other covering the city and much of the western, north-western and inner northern suburbs (Map 27).

The largest number and proportion of unemployment beneficiaries was recorded in the SLA of Playford - Elizabeth, with 1,900 people representing 12.9% of the eligible population. High proportions were also recorded in the SLAs of Port Adelaide Enfield - Port (9.6%, 1,575 people), Playford - West Central (9.2%, 731), Port Adelaide Enfield - Inner (8.0%, 952) and Charles Sturt - North-East (7.8%, 1,298).

The SLA of Adelaide Hills - Ranges had the lowest proportion, with 1.4% of its eligible population in receipt of unemployment benefits (100 people). Proportions of lower than 2.0% were also recorded in the SLAs of Adelaide Hills - Central (1.7%, 153), Burnside - South-West (1.8%, 236) and Tea Tree Gully - Hills (1.9%, 165).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

#The Community Development Employment Projects scheme is, effectively, an Aboriginal work-for-the-dole scheme and has been included in the data to avoid understating unemployment levels in the rural and remote areas where many communities participate in these schemes

Map 27: People receiving an unemployment benefit<sup>#</sup>, CNAHS, June 2004

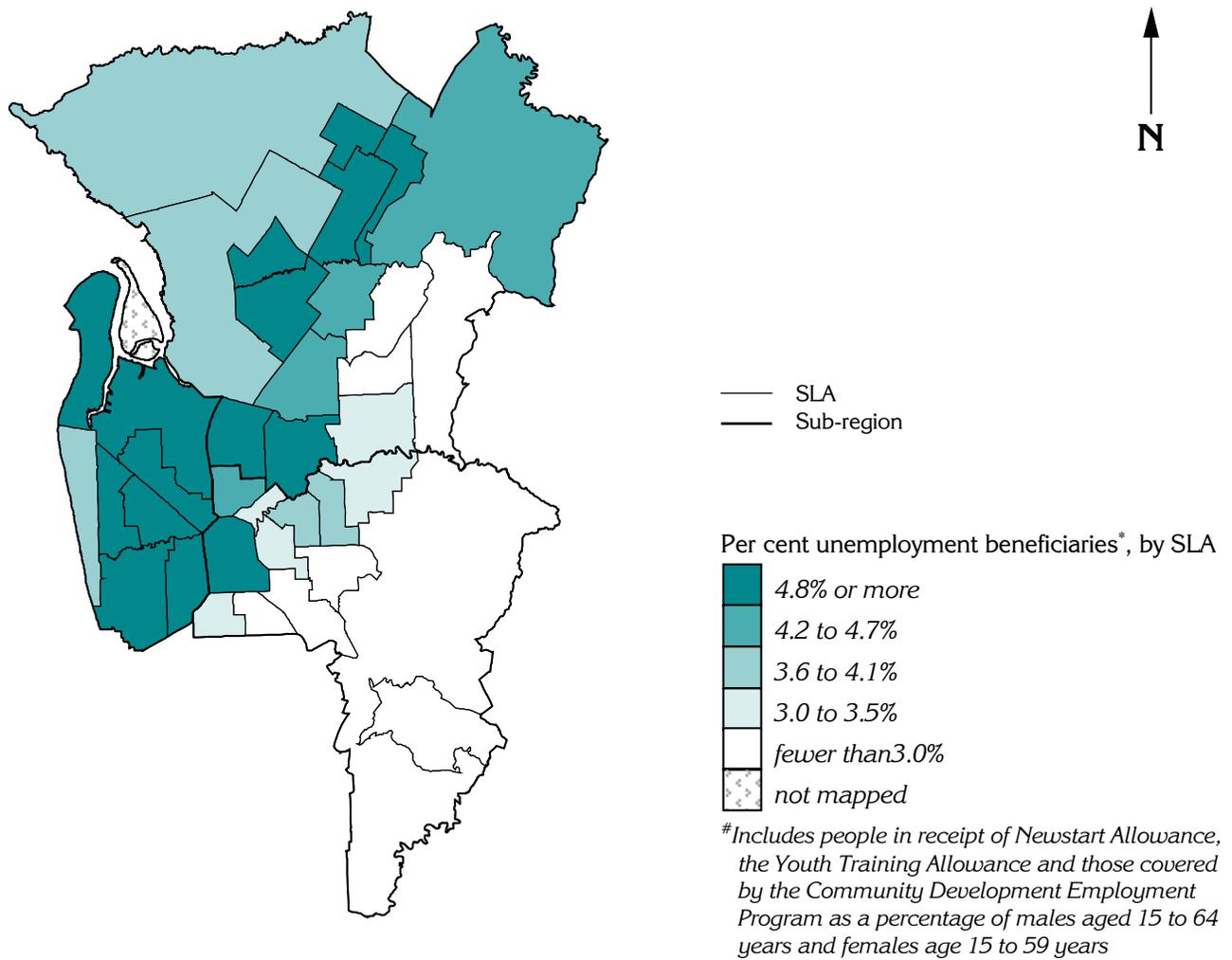


Table 28: People receiving an unemployment benefit<sup>#</sup>, CNAHS, June 2004

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	2,249	2.4
Quintile 2	3,440	3.5
Quintile 3	5,088	4.7
Quintile 4	4,668	5.1
Quintile 5: most disadvantaged areas	9,044	8.3
<b>Rate ratio</b>	..	<b>3.52<sup>**</sup></b>
<b>Northern</b>	<b>11,902</b>	<b>5.4</b>
<b>Western</b>	<b>8,010</b>	<b>6.0</b>
<b>Central East</b>	<b>4,578</b>	<b>3.1</b>
<b>CNAHS</b>	<b>24,489</b>	<b>4.9</b>
<b>Southern</b>	<b>8,789</b>	<b>4.1</b>
<b>Metropolitan regions</b>	<b>33,279</b>	<b>4.6</b>
<b>State total</b>	<b>47,783</b>	<b>4.9</b>

<sup>#</sup>The Community Development Employment Projects scheme is, effectively, an Aboriginal work-for-the-dole scheme and has been included in the data to avoid understating unemployment levels in the rural and remote areas where many communities participate in these schemes

<sup>\*</sup> indicates statistical significance: see page 19

# Income support: Children in welfare-dependent and other low income families

*Dependent children (and students) in families receiving a pension, benefit or Family Tax Benefit (A), with income under \$32,845: these children as a proportion of all children aged 17 years or under: data at June 2004*

**Overview**

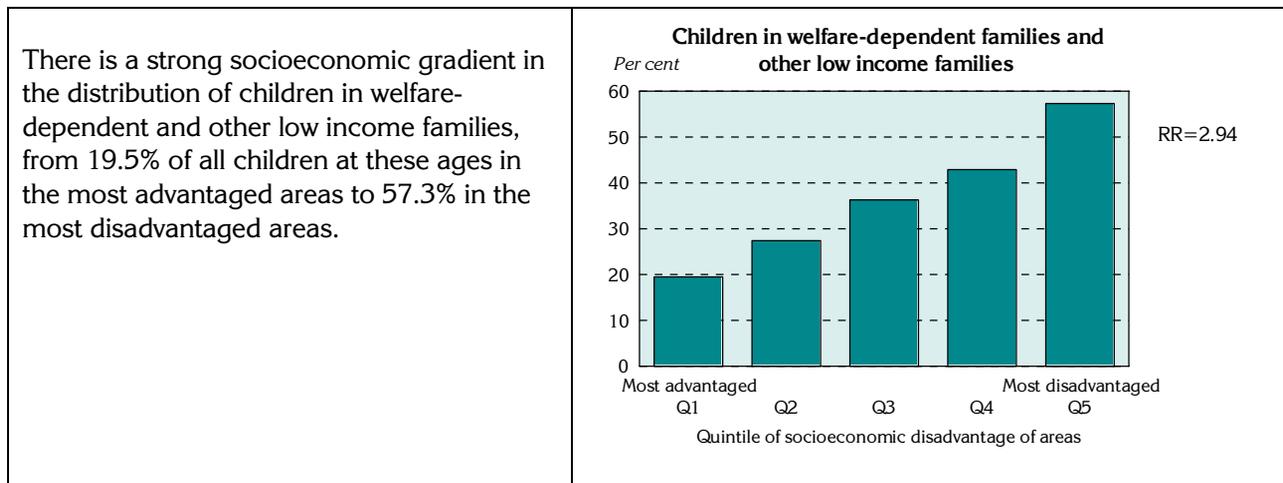
**Families receiving these pension and benefit types represent the majority of families reliant on government welfare payments for their main source of income, or wage earners on low incomes. Children living in families either solely or largely dependent on government for their income have the least access to income and other resources, and are more likely to face lower achievements in education and to have poorer health outcomes.**

Almost three quarters (72.4%) of dependent children in the metropolitan regions were located in the Central Northern region (61,132 children, 38.4% of the population under 17 years of age) (Table 29). The highest proportions of this population group were in a number of outer northern and north-western SLAs, while the lowest proportions were in the city, and adjacent SLAs to the south, east and north (Map 28).

Within this region, the SLAs of Playford - Elizabeth (75.2%, 4,831 children), Port Adelaide Enfield - Port (62.5%, 3,356), Salisbury - Central (59.9%, 4,017), Playford - West Central (57.1%, 2,248), Port Adelaide Enfield - Inner (55.3%, 2,114) and Charles Sturt - North-East (50.4%, 2,626) had more than half of their children under 17 years of age living in welfare-dependent and other low income families.

The lowest proportions were recorded in the inner eastern areas of Burnside - South-West (13.1%, 514), Walkerville (14.5%, 182), Burnside - North-East (15.8%, 626), Unley - East (17.1%, 581) and Norwood Payneham St Peters - West (17.5%, 492).

**Note: The majority (92.3%) of these children were under 15 years of age**



**Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.**

Map 28: Children in welfare-dependent and other low income families, CNAHS, 2004

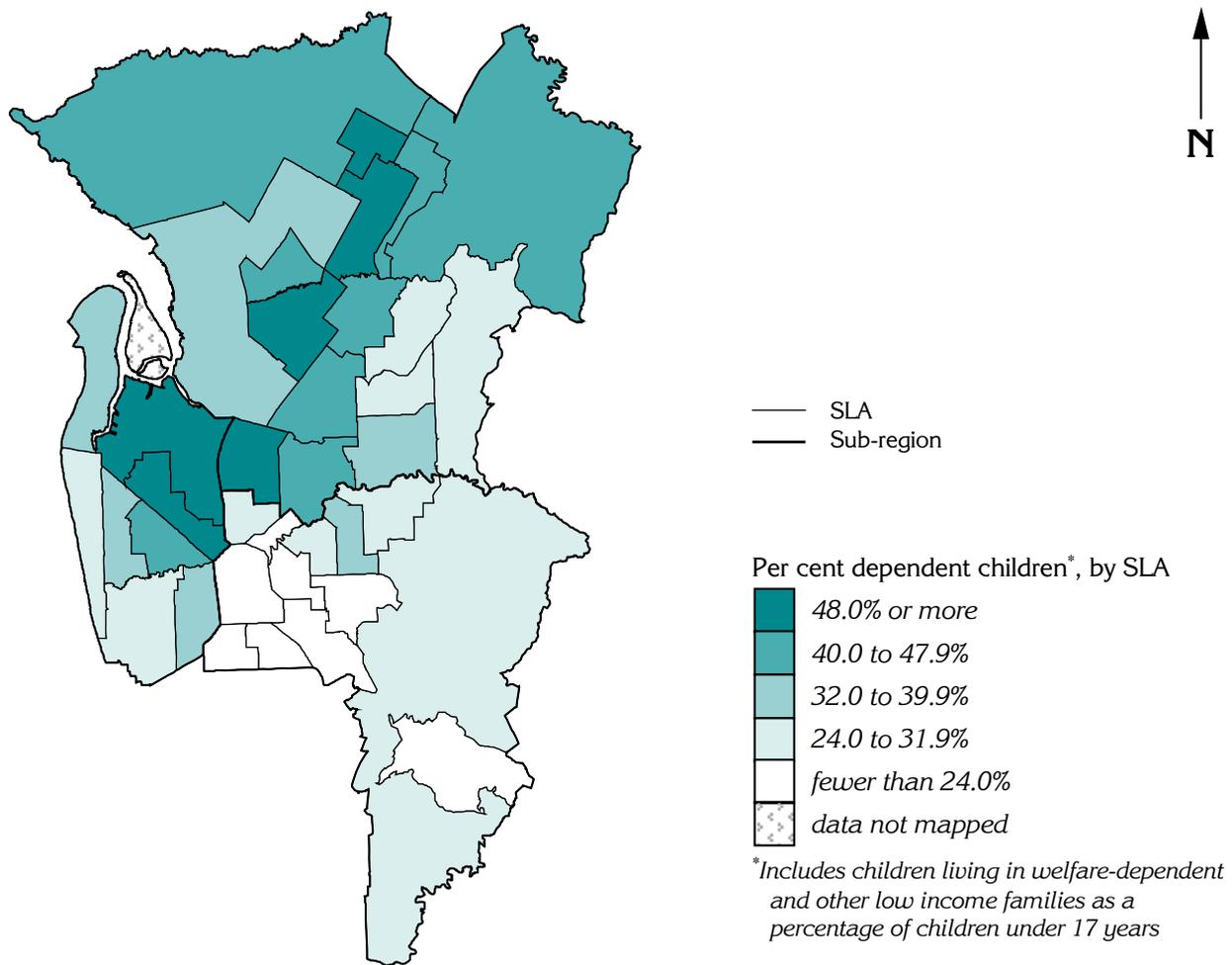


Table 29: Children in welfare-dependent and other low income families, CNAHS, 2004

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	5,265	19.5
Quintile 2	7,959	27.4
Quintile 3	11,962	36.3
Quintile 4	12,553	42.9
Quintile 5: most disadvantaged areas	23,392	57.3
<b>Rate ratio</b>	<b>..</b>	<b>2.94**</b>
<b>Northern</b>	<b>36,080</b>	<b>44.0</b>
<b>Western</b>	<b>15,941</b>	<b>41.2</b>
<b>Central East</b>	<b>9,111</b>	<b>22.7</b>
<b>CNAHS</b>	<b>61,132</b>	<b>38.4</b>
<b>Southern</b>	<b>23,334</b>	<b>33.5</b>
<b>Metropolitan regions</b>	<b>84,466</b>	<b>36.9</b>
<b>State total</b>	<b>123,689</b>	<b>37.5</b>

\* indicates statistical significance: see page 19

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# Health risk: Low birthweight babies

Low birthweight babies per 1,000 live births: data for 2000 to 2002

## Overview

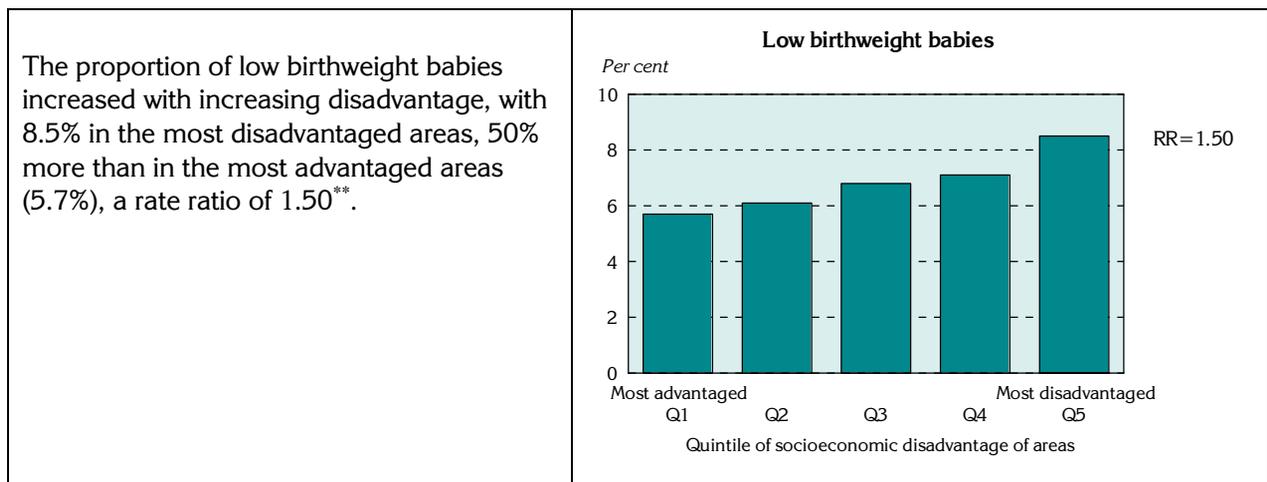
**Low birthweight babies are babies (both live-born and stillborn) weighing less than 2500 grams at birth. Low birthweight increases the risk of death in infancy and of serious health problems. An infant may be small when it is born for two reasons: it may be born early (premature), or it may be small for its gestational age (intra-uterine growth restriction). Risk factors include socioeconomic disadvantage; maternal size, age and nutritional status; the number of babies previously born; illness, and alcohol, tobacco and drug use during pregnancy; and duration of the pregnancy<sup>63</sup>. Babies born to Indigenous women in 2001 were more than twice as likely to be of low birthweight (12.9%) than those born to non-Indigenous women (6.0%). The low-birthweight proportions for babies born to Indigenous women were highest for SA (16.5%)<sup>64</sup>.**

There were 1,890 low birthweight babies born in Central Northern in 2000 to 2002, 7.0% of all births (Table 30). The highest rates of low birthweight babies were mapped in a number of north-western and outer northern SLAs, with low rates in the city and adjacent SLAs to the east (Map 29), generally reflecting the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

Of all Central Northern SLAs, babies with low birthweight were most predominant in Playford - Elizabeth (11.2%, 152 babies). There were also high proportions of low birthweight babies, but much smaller numbers, in Salisbury Balance (10.4%, 23 babies), Playford - West Central (9.1%, 63), Port Adelaide Enfield - Port (8.6%, 91), Port Adelaide Enfield - Inner (8.5%, 65), Playford - East Central (8.3%, 71), Salisbury - North-East (8.0%, 62), Playford - West (7.7%, 21), Playford - Hills (7.6%, 11) and West Torrens - East (7.6%, 66).

In addition to Playford - Elizabeth, several SLAs had large numbers of low birthweight babies: they were Salisbury - South-East (92 babies, 7.0%), Salisbury - Central (90, 7.4), Salisbury - Inner North (80, 7.2), Tea Tree Gully - North (75, 6.8), Port Adelaide Enfield - East (71, 6.8), Charles Sturt - North-East (66, 6.7%), Port Adelaide Enfield - Coast (65, 7.3%) and Tea Tree Gully - South (65, 5.8%).

The SLAs of Adelaide Hills - Ranges (4.5%, 16 babies) and - Central (4.6%, 18), Charles Sturt - Coastal (5.1%, 40), Norwood Payneham and St Peters - East (5.2%, 24), Adelaide (5.4%, 15) and Burnside - South-West (5.4%, 28) all had proportions in the lowest range mapped.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 29: Low birthweight babies, CNAHS, 2000 to 2002

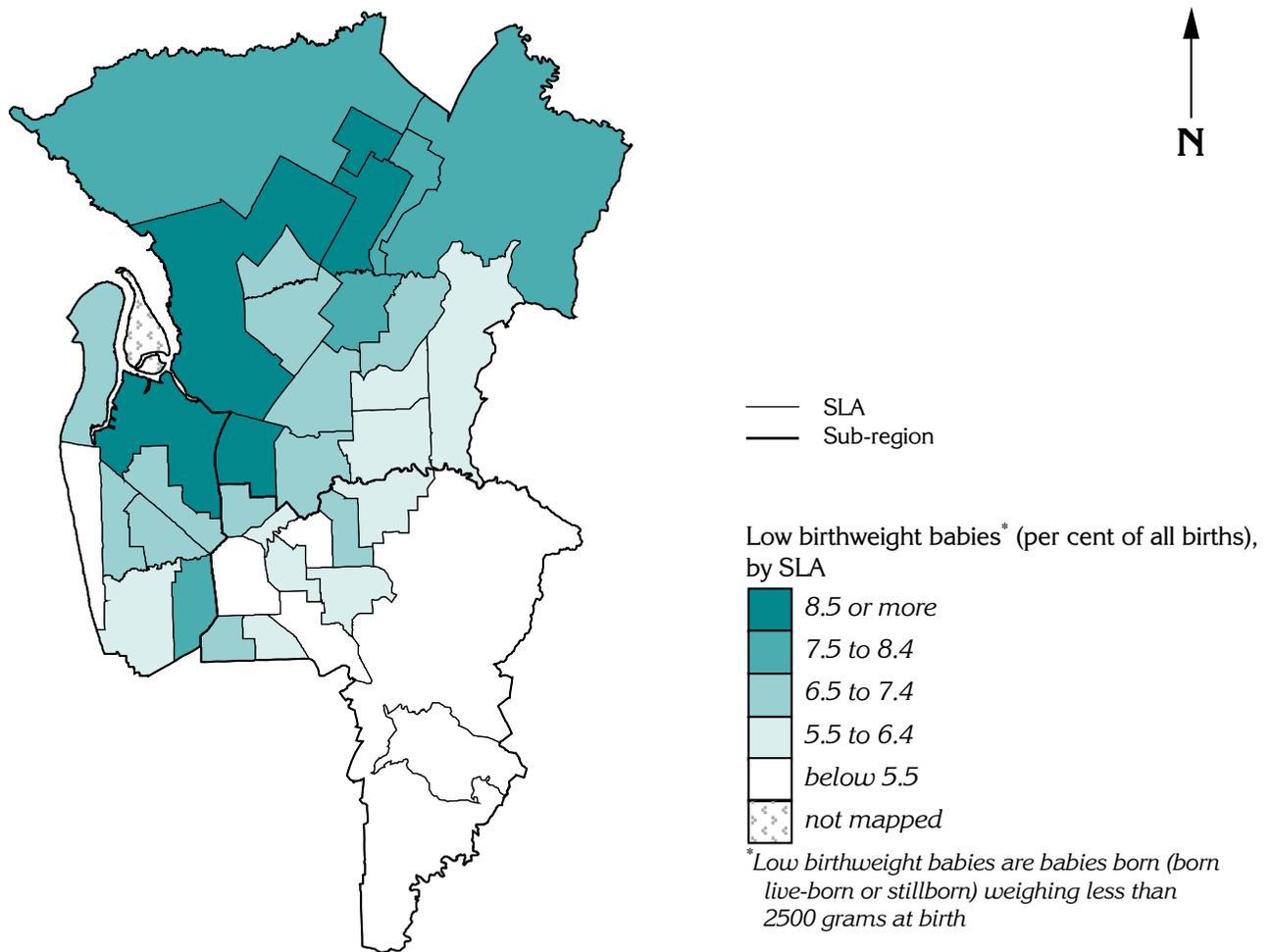


Table 30: Low birthweight babies, CNAHS, 2000 to 2002

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	246	5.7
Quintile 2	284	6.1
Quintile 3	382	6.8
Quintile 4	349	7.1
Quintile 5: most disadvantaged areas	629	8.5
<b>Rate ratio</b>	..	<b>1.50**</b>
<b>Northern</b>	<b>1,017</b>	<b>7.6</b>
<b>Western</b>	<b>482</b>	<b>6.9</b>
<b>Central East</b>	<b>391</b>	<b>5.8</b>
<b>CNAHS</b>	<b>1,890</b>	<b>7.0</b>
<b>Southern</b>	<b>681</b>	<b>6.4</b>
<b>Metropolitan regions</b>	<b>2,571</b>	<b>6.8</b>
<b>State total</b>	<b>3,624</b>	<b>6.8</b>

\* indicates statistical significance: see page 19

## Health risk: Pregnancy outcomes

*Risk factors for pregnancy: data for 2000 to 2002*

### **Risk factors most predictive of adverse perinatal outcomes**

Aboriginal maternal race; single marital status; high parity; previous still births; previous neonatal death; previous pregnancy termination; few antenatal visits; young maternal age; obstetric complications; complications of labour/delivery; homebirth; low birthweight; pre-term birth; low Apgar score; prolonged time to establish regular breathing; congenital abnormality; perinatal death.

### Overview

*The following data is collected through the Perinatal Statistics Collection and includes maternal socio-demographic, medical and obstetric information, as well as characteristics and outcomes of the baby. Studies undertaken by the Epidemiology Branch (SA Department of Health) in 1986 on these data identified seventeen risk factors that were most predictive of adverse perinatal outcomes (see box). Certain risk factors directly or indirectly reflect the socioeconomic status of women for whom these events are recorded.*

*A summary perinatal risk score has been calculated for each SLA. The score is calculated by examining the frequency with which a poorer outcome was recorded on individual risk factors (e.g. percentage of mothers with low birthweight babies, or with previous still births) in relation to the South Australian average. SLAs were considered to be 'high risk' for adverse perinatal outcomes if ten or more individual risk factors had a poor outcome, in comparison with the South Australian average.*

At the regional level, rates for seven risk factors were above the State average. However, there was considerable geographic variation, with the eastern sub-region having elevated rates for only two risk factors, compared to higher counts in northern (eleven) and western (eight) (Table 31). The majority of SLAs were not considered under this analysis to have a high risk for adverse perinatal outcomes. Eleven SLAs that were considered to be at high risk were located in a cluster across the inner northern and north-western suburbs, and extending to Playford in the outer north (Map 30).

Playford - Elizabeth had the highest possible perinatal risk factor score, with rates in all seventeen risk factors above the South Australian average, indicating poor perinatal outcomes. In addition to having the highest risk score in the region, this SLA had the largest number of births over this three year period.

The surrounding SLAs of Salisbury - Central (15 risk factors) and Salisbury - Inner North (15 risk factors) also had a very high risk of poor perinatal outcomes. The other high risk SLAs in this region were Playford - West Central (13 risk factors), Port Adelaide Enfield - Port (13), Playford - East Central (12), Port Adelaide Enfield - Inner (12), Salisbury Balance (12), Port Adelaide Enfield - Coast (ten) and Salisbury - North-East (ten) and - South East (ten).

Map 30: Perinatal risk factor scores, CNAHS, 2000 to 2002

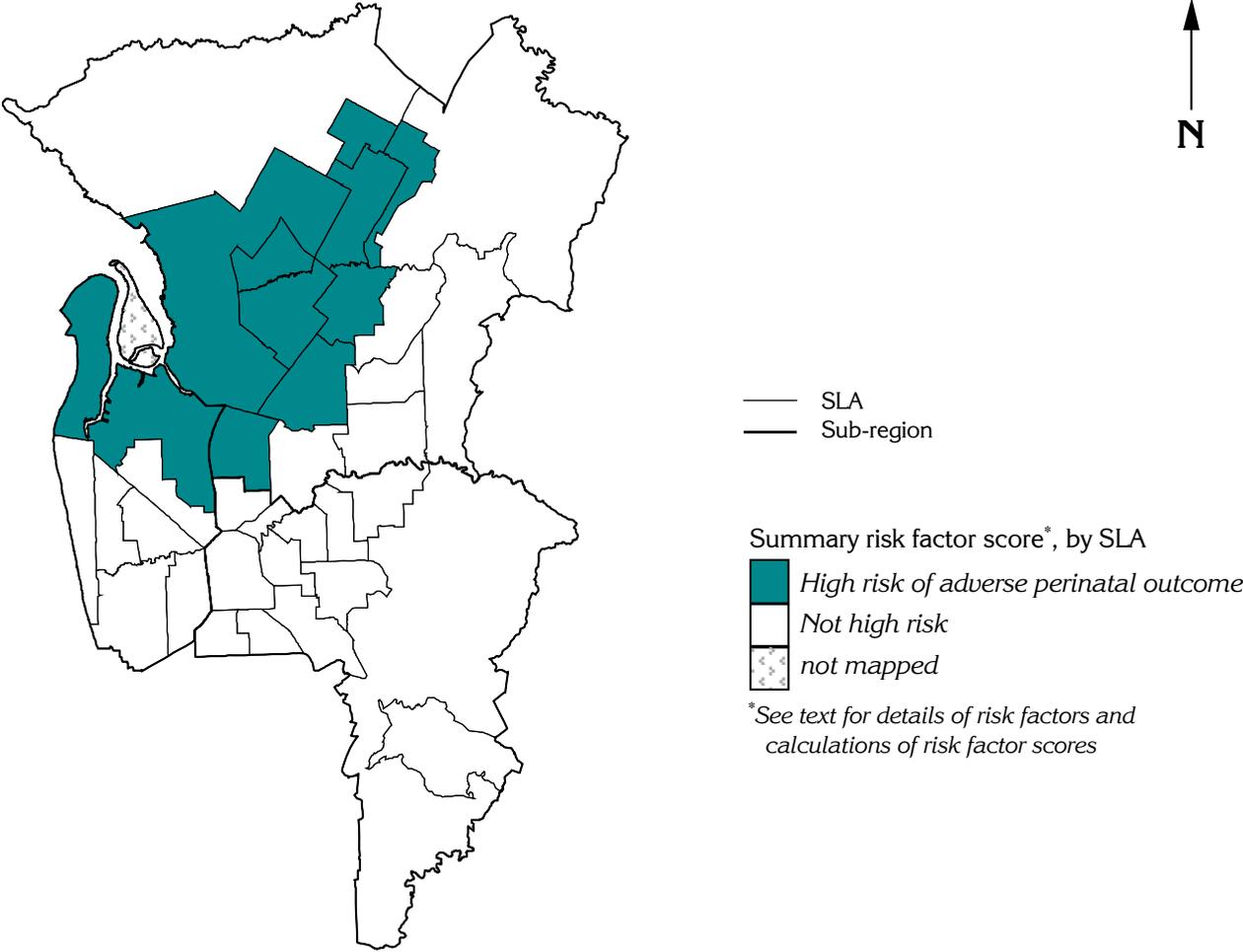


Table 31: Perinatal risk factors, CNAHS, 2000 to 2002

Area	Risk factors <sup>1</sup>
Northern (high risk)	12
Western (not high risk)	6
Central East (not high risk)	2
CNAHS (not high risk)	6
Southern (not high risk)	8

<sup>1</sup> Number of risk factors in the region with rates above the State average: high risk shown where ten or more risk factors have rates above the State average

# Health risk: Termination of pregnancy

Age-standardised rate of abortions per 1,000 women aged 15 to 44 years: data for 2000 to 2002

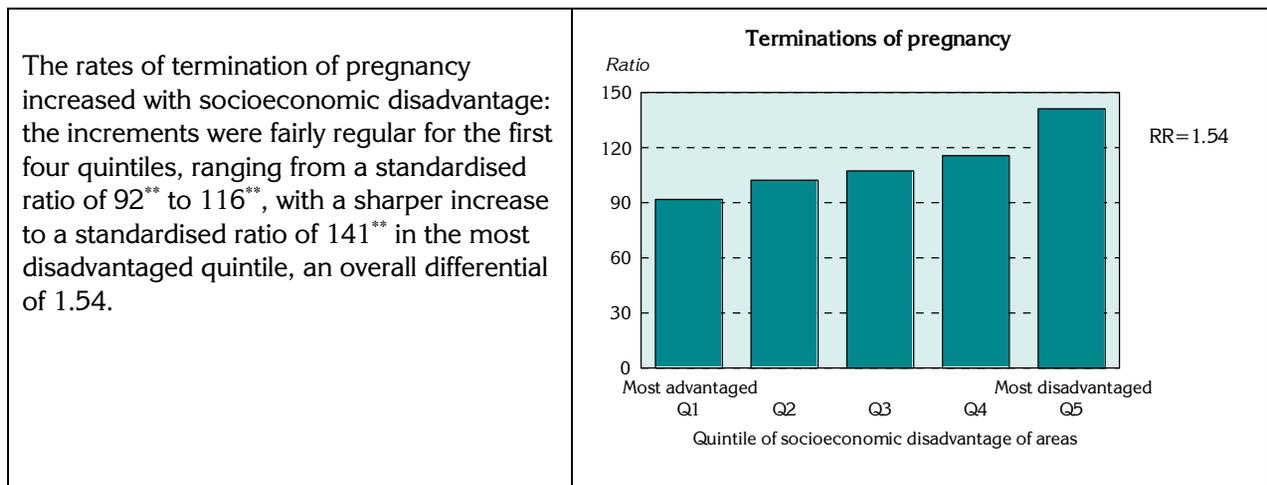
## Overview

*In 1969, legislation was amended to allow termination of pregnancy in certain circumstances. Across the metropolitan regions, the highest abortion rates were recorded for women in the 20 to 24 year age group (27.4% of terminations in 2002, down from 31.0% in 1985-87), followed by those under 20 years (23.1% of terminations in 2002, a slight reduction from 24.6% in 1985-87). The majority of terminations (91.9%) are conducted within the first 14 weeks of pregnancy<sup>65</sup>.*

Residents of Central Northern had 13% more terminations of pregnancy than expected from the State rates (a standardised ratio (SR) of 113\*\*, 10,016 terminations) (Table 32). The areas with the highest termination ratios (Map 31) follow the pattern of socioeconomic disadvantage shown by the IRSD (Map 23, page 113).

Port Adelaide Enfield - Port had over two thirds more terminations than expected (an SR of 169\*\*, 473 terminations). Highly elevated ratios were also recorded in Playford - Elizabeth (an SR of 157\*\*, 449 terminations), Charles Sturt - North-East (149\*\*, 442), Charles Sturt - Inner East (145\*\*, 347), Salisbury - Central (140\*\*, 468), Salisbury Balance (139\*\*, 101), Adelaide (137\*\*, 297), Salisbury - Inner North (131\*\*, 426), Port Adelaide Enfield - Inner (129\*\*, 284), Playford - West Central (126\*\*, 200) and Port Adelaide Enfield - Coast (125\*\*, 367).

Large numbers of terminations were recorded for women in the SLAs of Salisbury - South-East (419 terminations, an SR of 106), Port Adelaide Enfield - East (384, 116\*\*), West Torrens - West (363, 118\*\*), Charles Sturt - Coastal (356, 113) and Tea Tree Gully - South (351, 92).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 31: Termination of pregnancy, CNAHS, 2000 to 2002

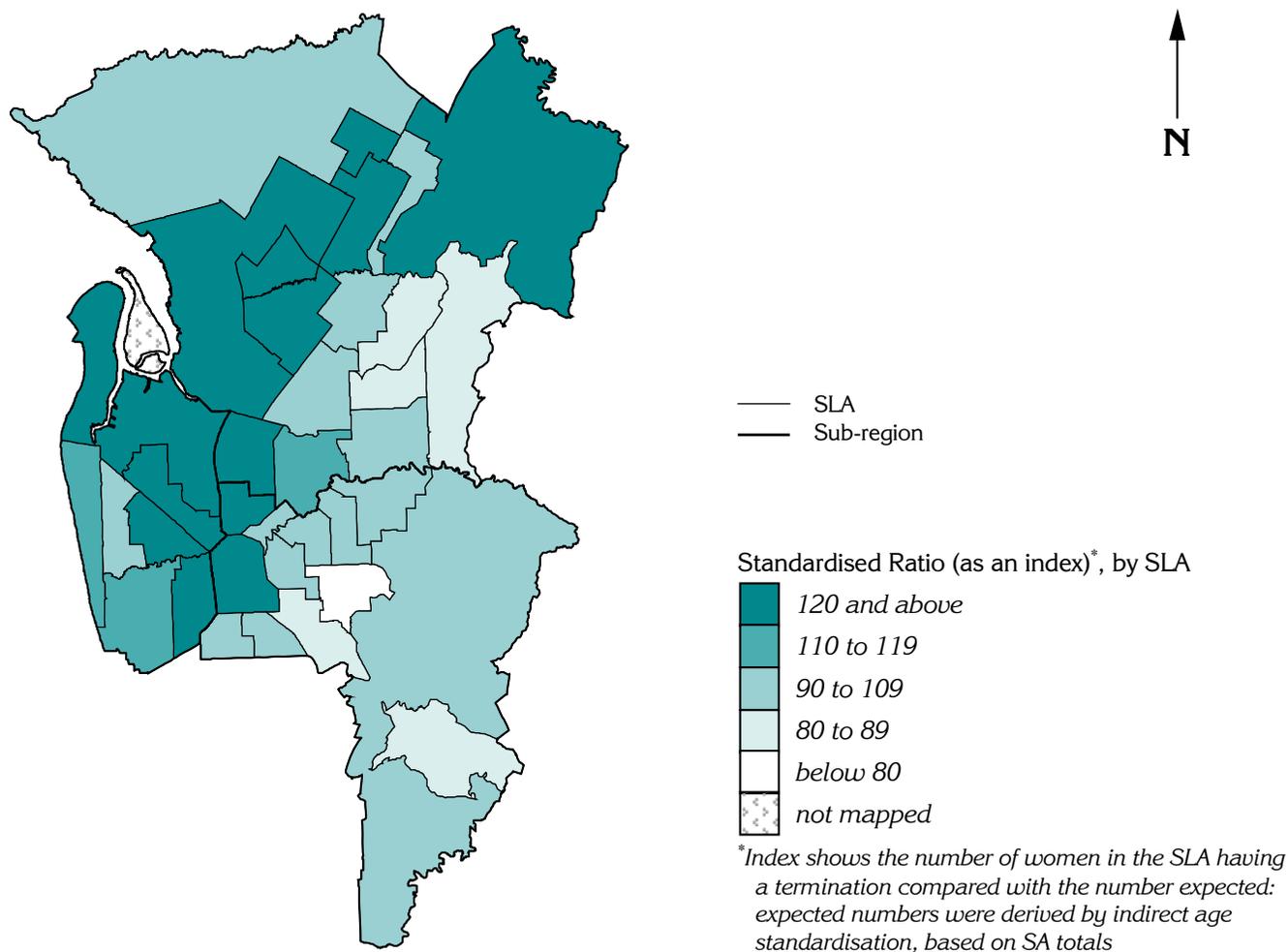


Table 32: Termination of pregnancy, CNAHS, 2000 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,489	92**
Quintile 2	1,795	102
Quintile 3	2,006	107**
Quintile 4	1,783	116**
Quintile 5: most disadvantaged areas	2,944	141**
<b>Rate ratio</b>	<b>..</b>	<b>1.54**</b>
<b>Northern</b>	<b>4,473</b>	<b>111**</b>
<b>Western</b>	<b>2,936</b>	<b>131**</b>
<b>Central East</b>	<b>2,608</b>	<b>100</b>
<b>CNAHS</b>	<b>10,016</b>	<b>113**</b>
<b>Southern</b>	<b>3,385</b>	<b>94**</b>
<b>Metropolitan regions</b>	<b>13,402</b>	<b>107**</b>
<b>State total</b>	<b>16,499</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Health risk: Smoking during pregnancy

Age standardised rate of women who reported smoking during pregnancy: data for 1998 to 2001

## Overview

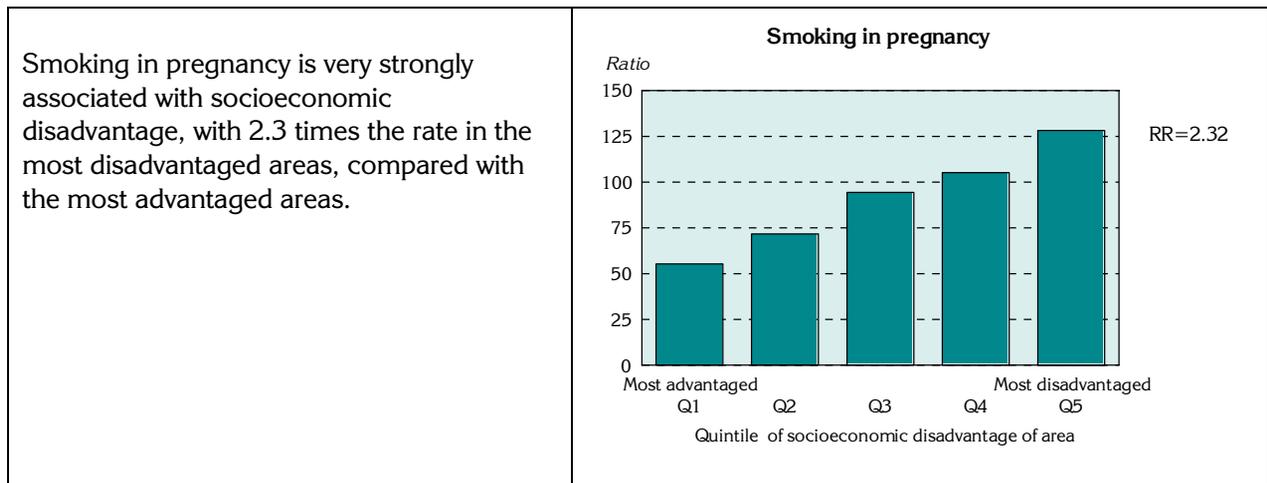
**Maternal smoking during pregnancy has many consequences before and after delivery, such as premature birth, miscarriage and perinatal death, low birthweight, and infants being smaller at birth than they should be. These problems may affect children through to adulthood, including a higher risk of disability and developmental delay, decreased lung function and increased respiratory illness <sup>66</sup>.**

In Central Northern, 8,097 women reported smoking during a pregnancy, two per cent fewer than expected from the State rates (a standardised ratio (SR) of 98\*) (Table 33). The highest rates of smoking during pregnancy were found in a number of north-western and outer northern SLAs (Map 32).

The SLAs with elevated rates of smoking during pregnancy included Playford - Elizabeth (an SR of 160\*\*, 797 pregnancies), Playford - West Central (145\*\*, 357 pregnancies), Playford - East Central (133\*\*, 387), Salisbury - Inner North (127\*\*, 510), Port Adelaide Enfield - Coast (124\*\*, 351), Port Adelaide Enfield - Port (122\*\*, 431) and Playford - Hills (122, 55).

There were large numbers of women smoking during a pregnancy living in Port Adelaide Enfield - East (339 pregnancies, an SR of 106), Tea Tree Gully - South (313, 88\*), Charles Sturt - North-East (311, 104), Tea Tree Gully - Central (268, 92), Charles Sturt - Inner West (215, 97) and - Inner East (213, 94).

The SLAs with the lowest rates of smoking during pregnancy largely form a block across Adelaide's middle SLAs: they include Unley - East (an SR of 37\*\*, 65 pregnancies), Burnside - South-West (38\*\*, 49), Norwood Payneham and St Peters - West (44\*\*, 63), Walkerville (48\*\*, 24), Unley - West (50\*\*, 75), Burnside - North-East (50\*\*, 68), Adelaide Hills - Central (54\*\*, 57) and Adelaide Hills - Ranges (56\*\*, 53).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 32: Smoking in pregnancy, CNAHS, 1998 to 2001

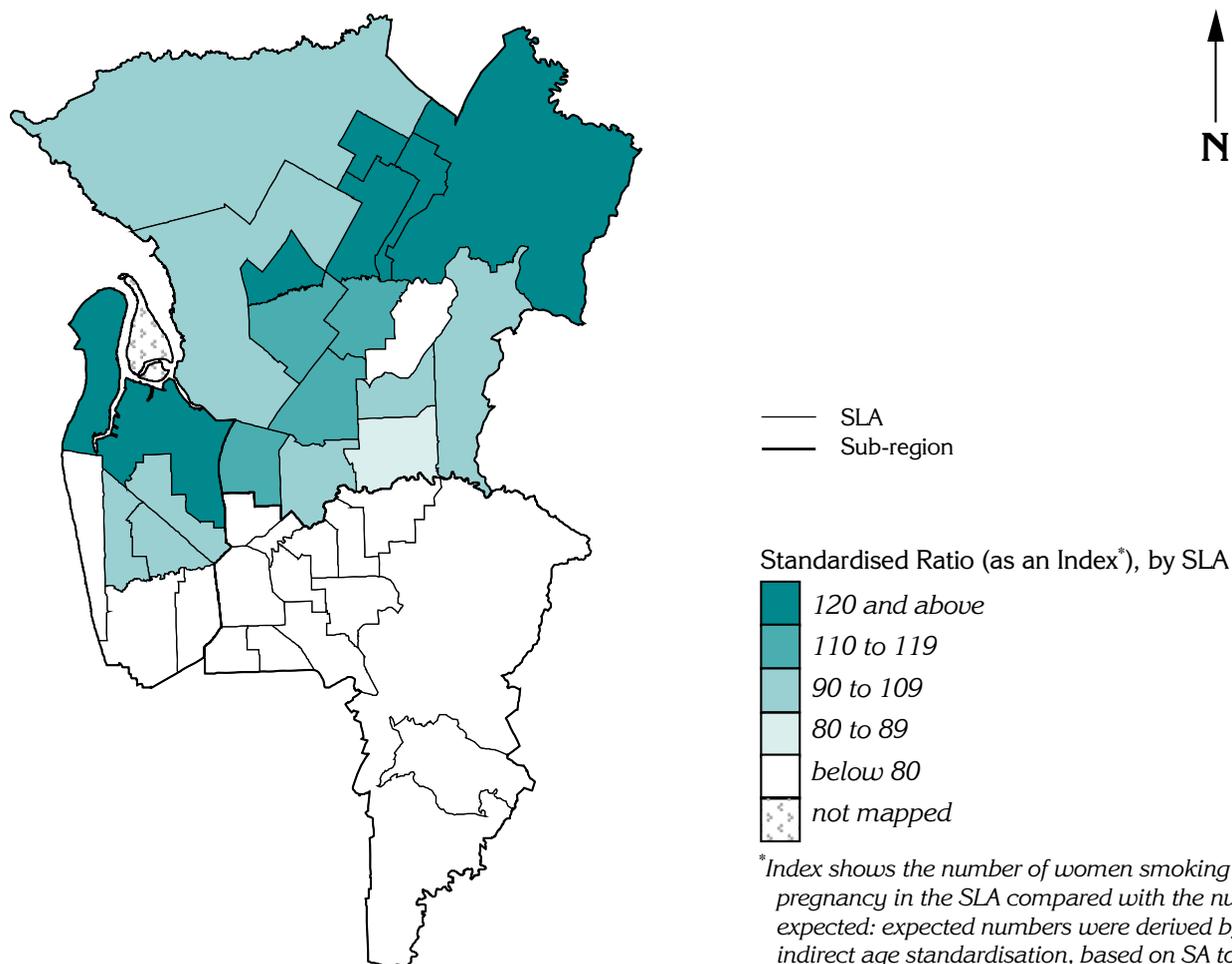


Table 33: Smoking in pregnancy, CNAHS, 1998 to 2001

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	640	55**
Quintile 2	959	72**
Quintile 3	1,639	94*
Quintile 4	1,598	105*
Quintile 5: most disadvantaged areas	3,261	128**
<b>Rate ratio</b>	..	<b>2.32**</b>
<b>Northern</b>	<b>5,029</b>	<b>115**</b>
<b>Western</b>	<b>2,078</b>	<b>98</b>
<b>Central East</b>	<b>990</b>	<b>55**</b>
<b>CNAHS</b>	<b>8,097</b>	<b>98*</b>
<b>Southern</b>	<b>2,696</b>	<b>83**</b>
<b>Metropolitan regions</b>	<b>10,794</b>	<b>94**</b>
<b>State total</b>	<b>16,558</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Immunisation status at one year

Number of fully immunised children at 12 months of age, as a proportion of all children at that age in 2002

## Overview

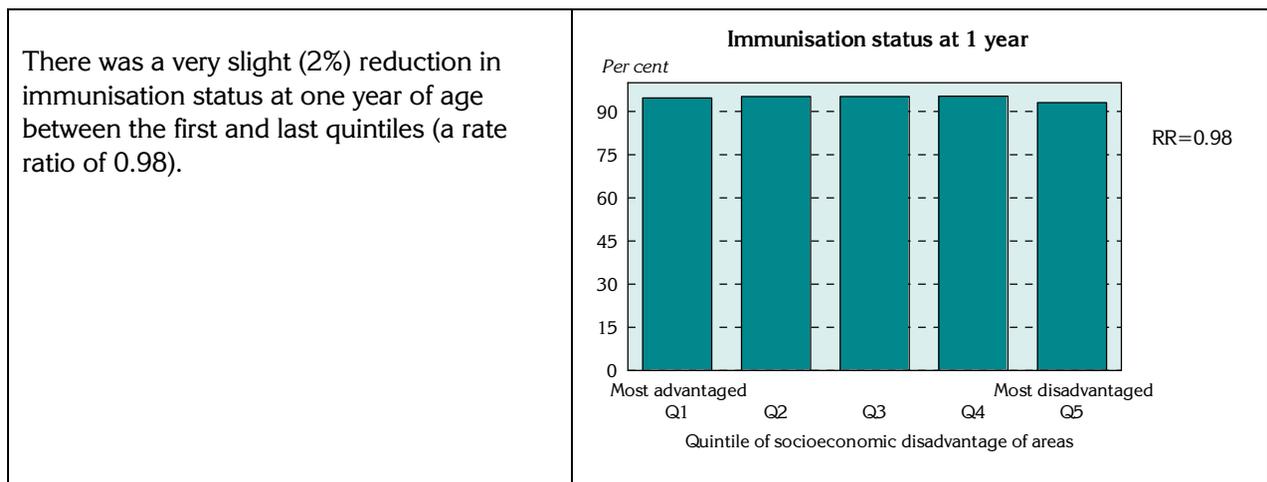
*Immunisation coverage among Australian children is an important public health issue. If a sufficiently large proportion of children have been immunised against a particular infectious disease, then the potential for that disease to spread is greatly reduced. Immunisation data are collected by the Health Insurance Commission, which has maintained the Australian Childhood Immunisation Register (ACIR) since 1996. The ACIR provides comprehensive information on the immunisation status of children under seven years of age in Australia. These data are used to provide a measure of coverage at a national, State/Territory and local level. By mid-1998, the register had sufficient coverage to be used for small area analysis. The data presented here are of children fully immunised at age 12 months.*

*Hull et al. (2002) found that, among other things, demographic factors “impacted on immunisation status”<sup>67</sup>. Children in larger, lower income families and families with a health care card were less likely to be age-appropriately immunised.*

The majority (94.6%) of 12 month old children in Central Northern were fully immunised (Table 34). The largest proportions of immunised children were located in SLAs in the inner and outer north-east, and in the western suburbs (Map 33).

The SLAs with the highest immunisation rates were Tea Tree Gully - North (98.5%, 369 children), Charles Sturt - Inner West (97.4%, 223), Campbelltown - East (97.1%, 290), Charles Sturt - Inner East (97.0%, 238), Tea Tree Gully - Hills (96.9%, 145), West Torrens - West (96.5%, 265), Campbelltown - West (96.2%, 196) and Playford - Hills (96.2%, 45). There were also large numbers of fully immunised children at 12 months in the SLAs of Salisbury - South-East (431 children, 94.3%), Salisbury - Central (364, 95.1%), Tea Tree Gully - South (347, 95.4%), Salisbury - Inner North (324, 94.6%) and Port Adelaide Enfield - East (323, 95.7%).

The SLAs with the lowest immunisation rates of 12 month-olds were Adelaide (87.3%, 76 children) and Playford - Elizabeth (88.4%, 371). Other SLAs with rates below average for the region – but not greatly so – were Playford - West Central (91.9%, 210), Port Adelaide Enfield - Inner (92.1%, 237), Adelaide Hills - Central (92.6%, 131), Adelaide Hills - Ranges (92.8%, 114), Prospect (92.9%, 219), Playford - West (93.0%, 97), Walkerville (93.8%, 65), Port Adelaide Enfield - Port (93.8%, 302) and Burnside - South-West (93.9%, 160).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 33: Immunisation status at one year of age, CNAHS, 2002

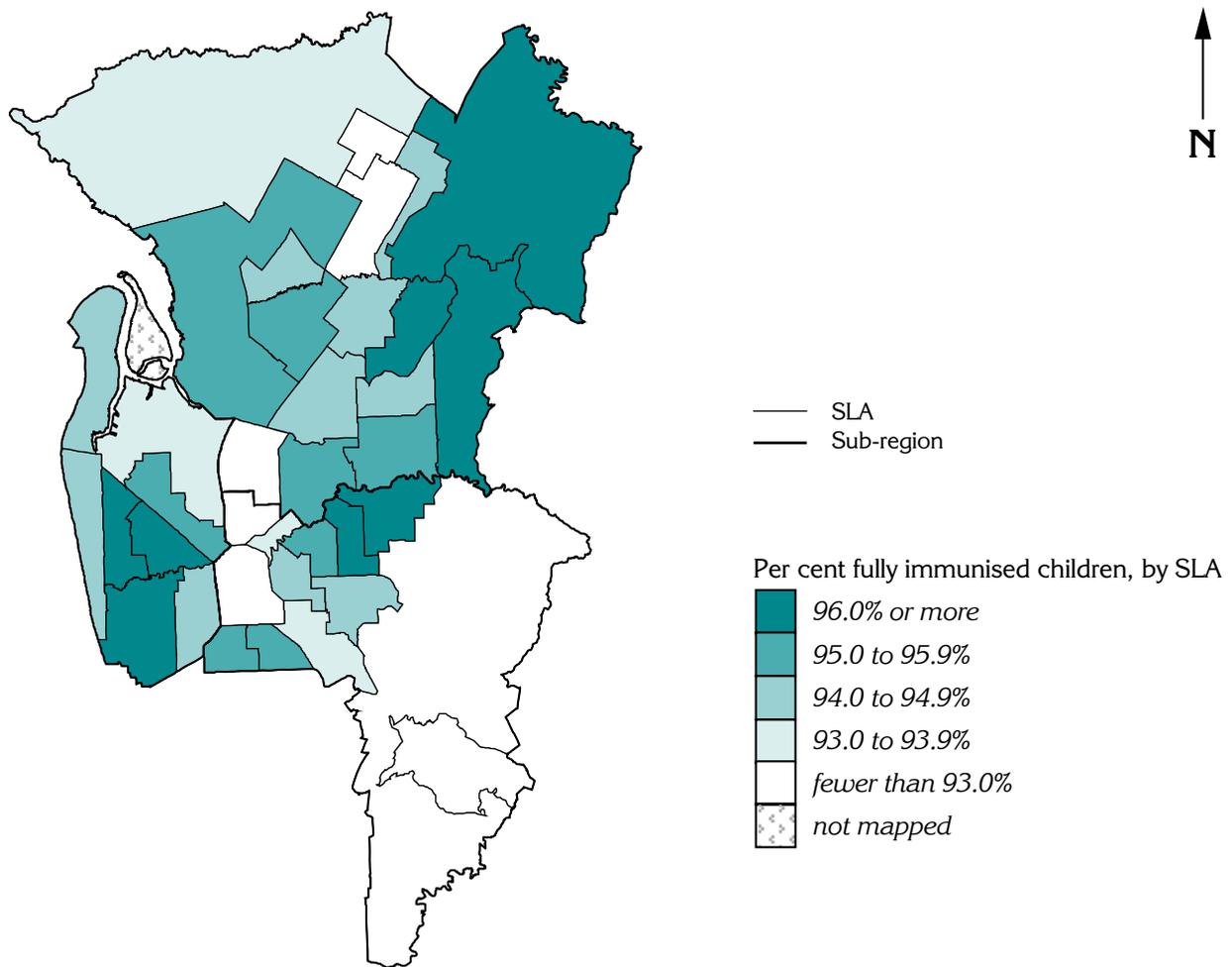


Table 34: Immunisation status at one year of age, CNAHS, 2002

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,388	94.7
Quintile 2	1,481	95.2
Quintile 3	1,731	95.2
Quintile 4	1,554	95.3
Quintile 5: most disadvantaged areas	2,153	93.1
<b>Rate ratio</b>	<b>..</b>	<b>0.98</b>
<b>Northern</b>	<b>4,127</b>	<b>94.2</b>
<b>Western</b>	<b>2,068</b>	<b>95.3</b>
<b>Central East</b>	<b>2,113</b>	<b>94.6</b>
<b>CNAHS</b>	<b>8,308</b>	<b>94.6</b>
<b>Southern</b>	<b>3,338</b>	<b>95.0</b>
<b>Metropolitan regions</b>	<b>11,646</b>	<b>94.7</b>
<b>State total</b>	<b>16,657</b>	<b>94.6</b>

# Overweight in childhood: Overweight (not obese) four year old boys

Number of four year old boys whose Body Mass Index rated them as overweight (not obese), as a proportion of all boys at that age: data for 2000 to 2003

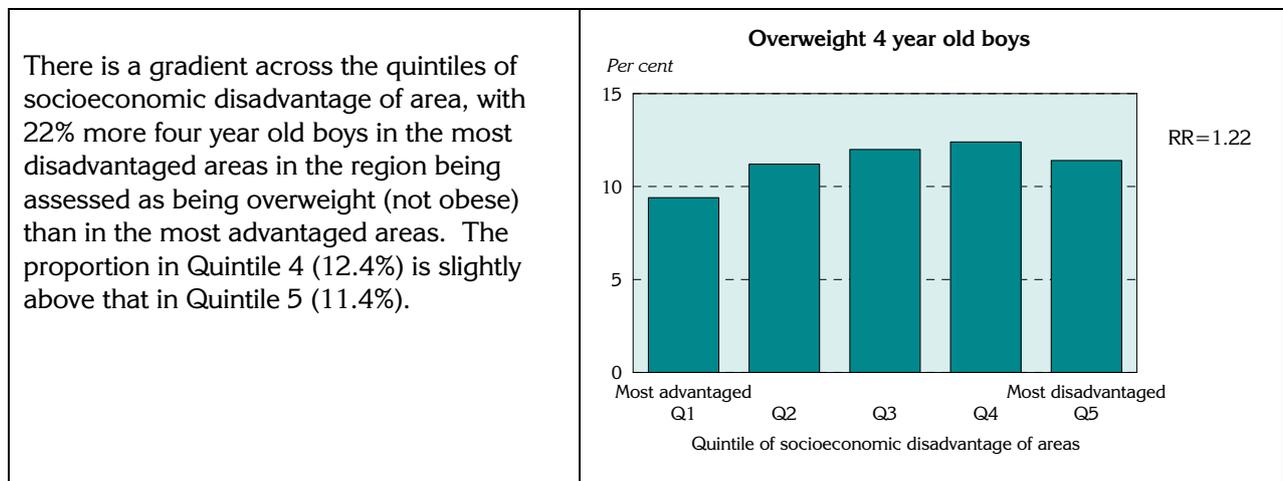
## Overview

**Overweight and obesity in childhood and adolescence can cause a wide range of significant physical and emotional health problems, and increase the risk of premature illness and death in adulthood. Australian prevalence rates are high by international standards and represent a serious public health concern. Current rates in South Australia represent a dramatic increase since 1995, of around 70% for boys and girls at this age<sup>33</sup>.**

In Central Northern, 11.4% of four year old boys were classified as overweight (1,318 boys) (Table 35). The geographic distribution of overweight four year old boys (Map 34) is somewhat mixed, although it shows similarities to the pattern of socioeconomic disadvantage (Map 23, page 113).

High proportions were found in the SLAs of Port Adelaide Enfield - Coast (16.4%, 63 boys), Adelaide (16.3%, seven), Playford - West (14.9%, 28), and Charles Sturt - Inner West (13.8%, 42) and - Coastal (13.2%, 40). Relatively large numbers were also recorded in Salisbury - South-East (76 boys, 12.2%), Tea Tree Gully - North (73, 12.0%), Salisbury - Central (66, 11.0%), and Playford - Elizabeth (67, 11.5%) and - Inner North (61, 11.0%).

Low proportions of overweight four year old boys were recorded in Burnside - South-West (7.3%, 13 boys), Campbelltown - East (7.6%, 29), Adelaide Hills - Ranges (7.6%, 13), Unley - East and West (both 8.5%, 19), Adelaide Hills - Central (8.5%, 19), Salisbury Balance (8.7%, ten) and Campbelltown - West (9.9%, 22).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Note: These data were provided by Child and Youth Health (CYH) who have, for a number of years, collected height and weight information for children aged from four years three months to five years (collectively referred to as four year old children in the text). The measurements are taken at child care and pre-school centres by staff of CYH, with an average coverage at these ages of just under 80%. The data for girls have not been shown because of concerns with data quality.

Map 34: Overweight (not obese) four year old boys, CNAHS, 2000 to 2003

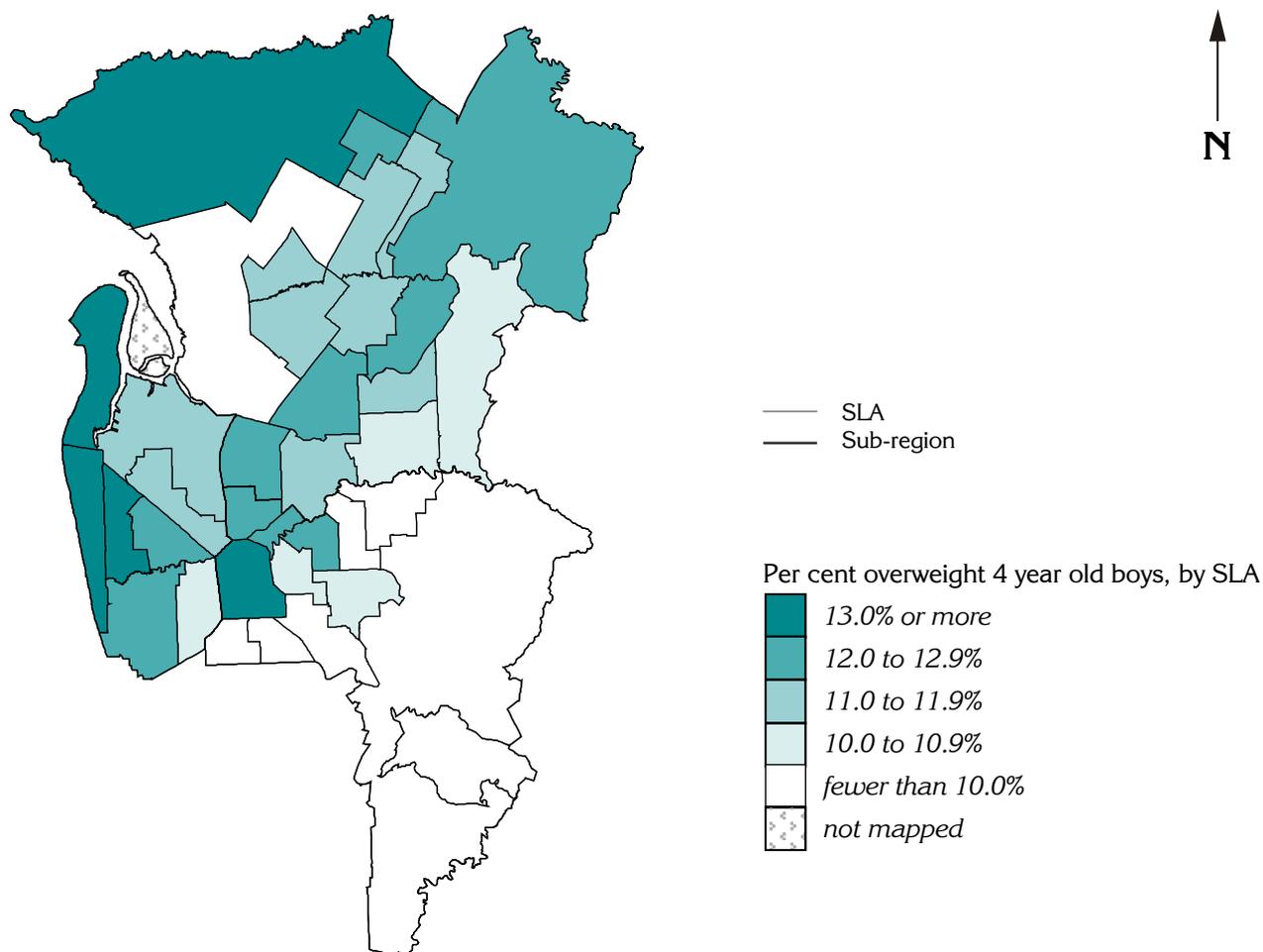


Table 35: Overweight four year old boys, CNAHS, 2000 to 2003

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	164	9.4
Quintile 2	232	11.2
Quintile 3	284	12.0
Quintile 4	274	12.4
Quintile 5: most disadvantaged areas	365	11.4
<b>Rate ratio</b>	<b>..</b>	<b>1.22*</b>
<b>Northern</b>	<b>747</b>	<b>11.5</b>
<b>Western</b>	<b>331</b>	<b>12.8</b>
<b>Central East</b>	<b>240</b>	<b>9.5</b>
<b>CNAHS</b>	<b>1,318</b>	<b>11.4</b>
<b>Southern</b>	<b>549</b>	<b>11.1</b>
<b>Metropolitan regions</b>	<b>1,867</b>	<b>11.3</b>
<b>State total</b>	<b>3,066</b>	<b>12.1</b>

## Obesity in childhood: Obese four year old boys

Number of four year old boys whose Body Mass Index rated them as not obese, as a proportion of all boys at that age: data for 2000 to 2003

### Overview

**Overweight and obesity in childhood and adolescence can cause a wide range of significant physical and emotional health problems, and increase the risk of premature illness and death in adulthood. These data were provided by Child and Youth Health (CYH) who have, for a number of years, collected height and weight information for children aged from four years three months to five years (collectively referred to as four year old children in the text). The measurements are taken at child care and pre-school centres by staff of CYH, with an average coverage at these ages of just under 80%. The data for girls have not been shown because of concerns with data quality**

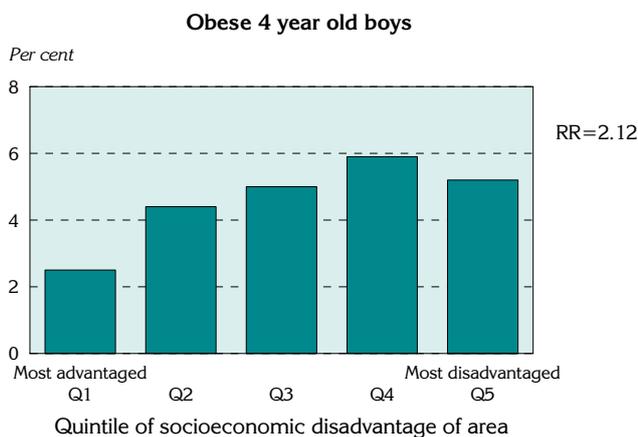
Central Northern had a relatively high proportion of boys assessed as being obese (4.7%, 548 boys) (Table 36). A cluster of SLAs with above-average rates of obesity lies across the western, north-western and inner- and outer-northern suburbs (Map 35).

SLAs with the largest proportions of these boys in their populations were the adjoining SLAs of Port Adelaide Enfield - East (8.0%, 30 boys), Charles Sturt - Inner West (6.7%, 21), Salisbury Balance (6.6%, seven boys), Port Adelaide Enfield - Port (6.6%, 24) and - Inner (6.5%, 18), and Salisbury - South-East (6.3%, 39).

Relatively large numbers of obese four year old boys were found in Playford - Elizabeth (35 boys, 6.0%), Salisbury - Central (26, 4.3%), Tea Tree Gully - South (24, 4.7%), Port Adelaide Enfield - Coast (22, 5.7%) and Campbelltown - East (22, 5.6%).

Low proportions (and relatively low numbers) were recorded for boys in Unley - East (2.0%, five boys), Tea Tree Gully - Hills (2.1%, four boys), Adelaide Hills - Central (2.6%, six), Salisbury - North-East (2.9%, 13), and Tea Tree Gully - North (3.4%, 21).

There is a very strong gradient across the quintiles of socioeconomic disadvantage of area, with twice the proportion of four year old boys in the most disadvantaged areas in the region assessed as being obese than in the most advantaged areas. The proportion in Quintile 4 (5.9%) is above that in Quintile 5 (5.2%).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 35: Obese four year old boys, CNAHS, 2000 to 2003

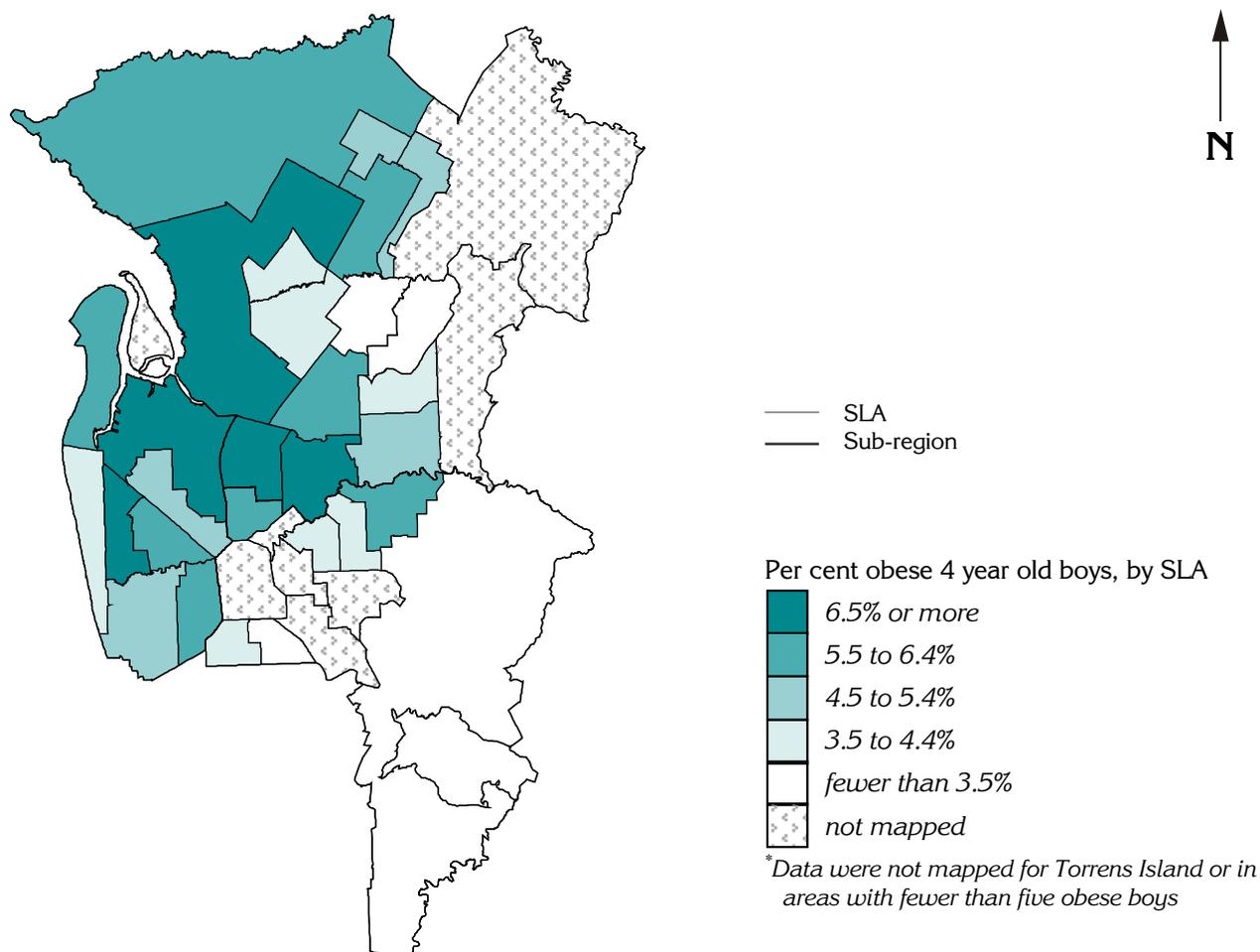


Table 36: Obese four year old boys, CNAHS, 2000 to 2003

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	43	2.5
Quintile 2	90	4.4
Quintile 3	119	5.0
Quintile 4	130	5.9
Quintile 5: most disadvantaged areas	167	5.2
<b>Rate ratio</b>	<b>..</b>	<b>2.12*</b>
<b>Northern</b>	<b>312</b>	<b>4.8</b>
<b>Western</b>	<b>147</b>	<b>5.7</b>
<b>Central East</b>	<b>89</b>	<b>3.5</b>
<b>CNAHS</b>	<b>548</b>	<b>4.7</b>
<b>Southern</b>	<b>202</b>	<b>4.1</b>
<b>Metropolitan regions</b>	<b>751</b>	<b>4.5</b>
<b>State total</b>	<b>1,148</b>	<b>4.5</b>

## Dental health: No decayed, missing or filled teeth at 12 years of age

Proportion of 12 year olds attending a SA Dental Service (SADS) clinic who have no decayed, missing or filled teeth, 2002 to 2004

### Overview

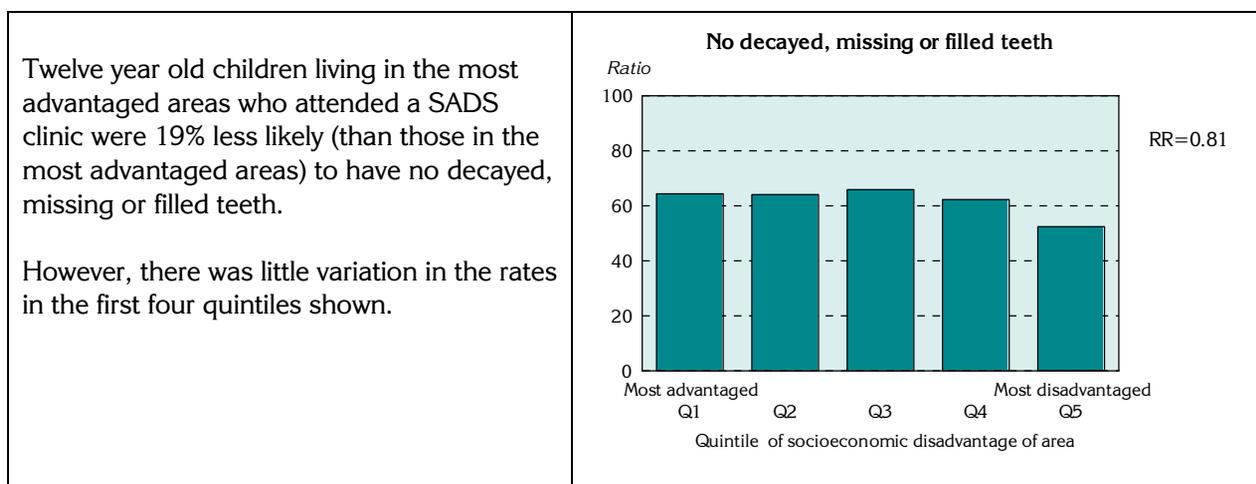
**Dental decay and gum disease are costly health burdens, and yet, are also some of the most preventable health conditions. Overall, Australian children experience comparatively low levels of dental decay. However, a minority of children still experience extensive decay and carry most of the burden of this disease** <sup>68</sup>

In Central Northern, 60.9% of children aged 12 years were assessed by the SDS as being without any decayed, missing or filled teeth, a total of 5,432 children (Table 37). The highest proportions of 12 year old children with healthy teeth were located in a number of SLAs adjacent to the city, to the east, south and west, and in parts of the north-east. SLAs with the highest proportion of children with decayed, missing or filled teeth were located in a band, starting in Adelaide and covering SLAs to the north-west and north, and extending to the outer-north (Map 36).

Around three quarters of 12 year old children from West Torrens - West (77.6%, 225 children) and West Torrens - East (74.6%, 185) who attended an SDS clinic had no decayed, missing or filled teeth. There were also high proportions in Burnside - South-West (69.5%, 91 children), Tea Tree Gully - South (69.0%, 267), Charles Sturt - Coastal (68.5%, 241) and Salisbury - North-East (68.3%, 185).

Large numbers of 12 year olds without any decayed, missing or filled teeth were recorded in Salisbury - South-East (293 children, 60.4%), Tea Tree Gully - North (257, 65.7%) and Charles Sturt - Inner West (210, 66.5%).

Children in Charles Sturt - North-East had a poor outcome on this measure, with 37.8% of 12 year olds attending an SADS clinic without these dental problems (126 children aged 12), followed by Port Adelaide Enfield - Port (48.1%, 185), Salisbury - Inner North (51.7%, 185) and - Central (54.8%, 251), Port Adelaide Enfield - Coast (57.0%, 254) and Playford - Elizabeth (57.9%, 256). Of the 26 children aged 12 living in the SLA of Adelaide who were clients of SADS, none were free of decayed, missing or filled teeth.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 36: Twelve year olds with no decayed, missing or filled teeth, CNAHS, 2002 to 2004

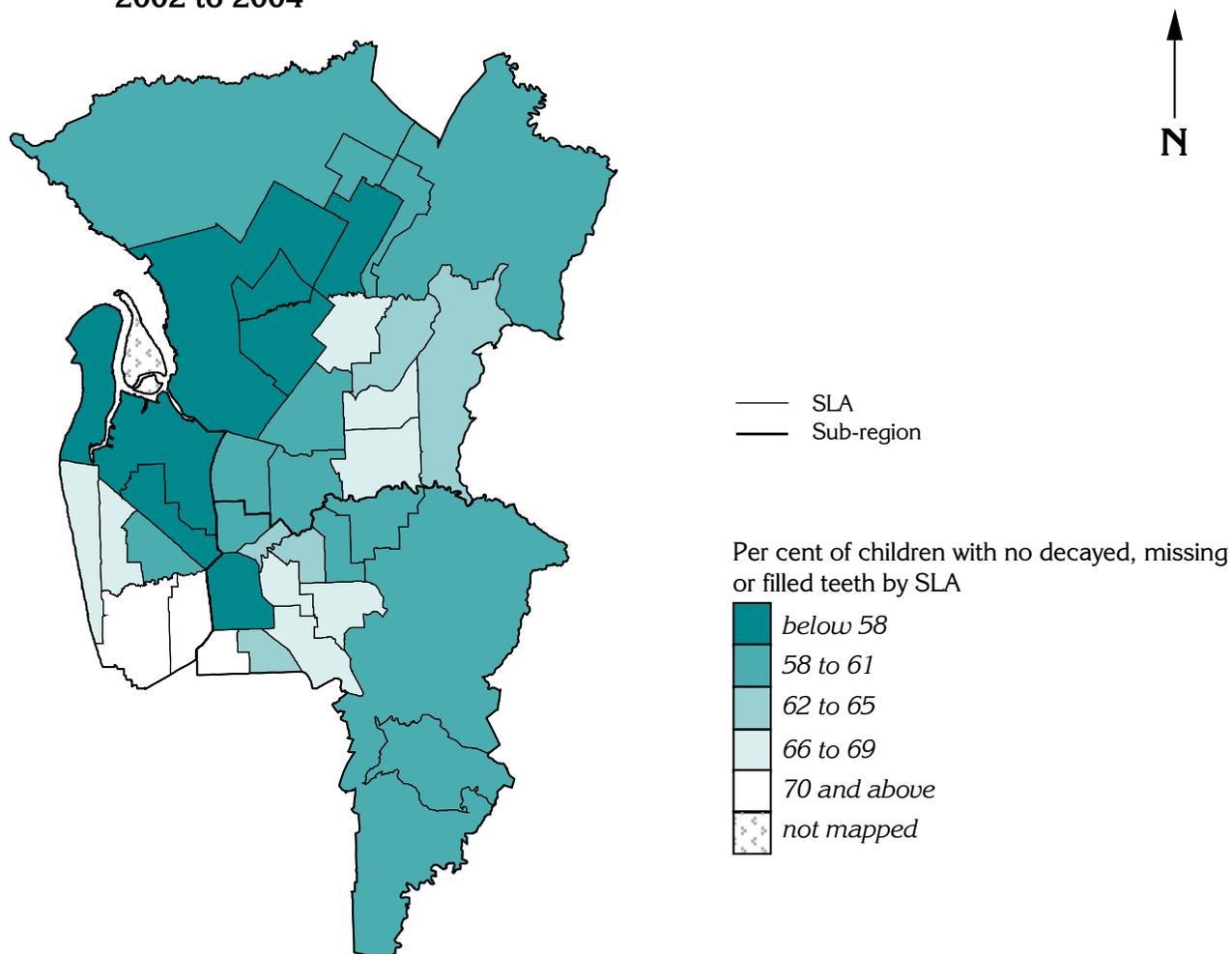


Table 37: Twelve year olds with no decayed, missing or filled teeth, CNAHS, 2002 to 2004

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,116	64.4
Quintile 2	1,540	64.1
Quintile 3	1,986	65.9
Quintile 4	1,768	62.3
Quintile 5: most disadvantaged areas	2,515	52.4
<b>Rate ratio</b>	..	<b>0.81**</b>
<b>Northern</b>	<b>2,793</b>	<b>60.9</b>
<b>Western</b>	<b>1,589</b>	<b>60.0</b>
<b>Central East</b>	<b>1,050</b>	<b>62.0</b>
<b>CNAHS</b>	<b>5,432</b>	<b>60.9</b>
<b>Southern</b>	<b>3,051</b>	<b>67.3</b>
<b>Metropolitan regions</b>	<b>8,483</b>	<b>63.0</b>
<b>State total</b>	<b>12,254</b>	<b>61.2</b>

\* indicates statistical significance: see page 19

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## Explanatory notes for chronic disease estimates

### Notes on estimates of chronic diseases and associated risk factors from the 2001 NHS

Indicator	Notes on the data
<b>Estimates of chronic disease and injury</b>	
Long term conditions	- Respondents were asked whether they had been diagnosed with any long term health condition (a condition which has lasted or is expected to last for 6 months or more), and were also asked whether they had been told by a doctor or nurse that they had asthma, cancer, heart and circulatory conditions, and/or diabetes
Injury event	- Injuries which occurred in the four weeks prior to interview
<b>Estimates of measures of self-reported health</b>	
Very high psychological distress levels (K10)	- Derived from the Kessler Psychological Distress Scale 10 items (K-10)*, which is a scale of non-specific psychological distress based on 10 questions about negative emotional states in the 4 weeks prior to interview. 'Very high' distress is the highest level of distress category (of a total of four categories)
Fair or poor self-assessed health status	- Respondent's general assessment of their own health, against a five point scale from excellent through to poor – 'fair' or 'poor' being the two lowest in the scale
<b>Estimates of selected risk factors</b>	
Overweight & obese	- Based on self-reported height and weight; BMI calculated and grouped into categories (to allow reporting against both WHO and NHMRC guidelines) as follows – overweight (not obese): 25.0 to less than 30.0; obese: 30.0 and greater
Smokers	- Respondent's undertaking regular (or daily) smoking at the time of interview
Physical inactivity	- Did not exercise in the two weeks prior to interview through sport, recreation or fitness (including walking) – excludes incidental exercise undertaken for other reasons, such as for work or while engaged in domestic duties
High health risk due to alcohol consumed	- Respondent's estimated average daily alcohol consumption in the seven days prior to interview (based on number of days and quantity consumed). Alcohol risk levels were grouped according to NHMRC risk levels for harm in the long term, with 'high risk' defined as a daily consumption of more than 75 ml for males and 50 ml for females

Note: For a full description, refer to *ABS 2001 National Health Survey*, Cat. No. 4364.0 and *ABS 2001 Health Risk Factors*, Cat. No. 4812.0. \*Reference for K10: Kessler & Mroczek 1994

## Estimated disease prevalence: Respiratory system diseases

Estimated number of people who reported in the 2001 NHS having been told by a doctor or nurse they had respiratory system diseases

### Overview

**Chronic respiratory system diseases are those that affect the respiratory tract and include asthma, lung diseases, and breathing disorders. They often persist over many years and, if severe, may require a wide range of treatments and medications from specialised health practitioners. Some diseases may be caused by environmental pollutants such as tobacco smoke or toxic emissions from industry or transport. Others are the result of genetic conditions which affect people from a young age, such as cystic fibrosis.**

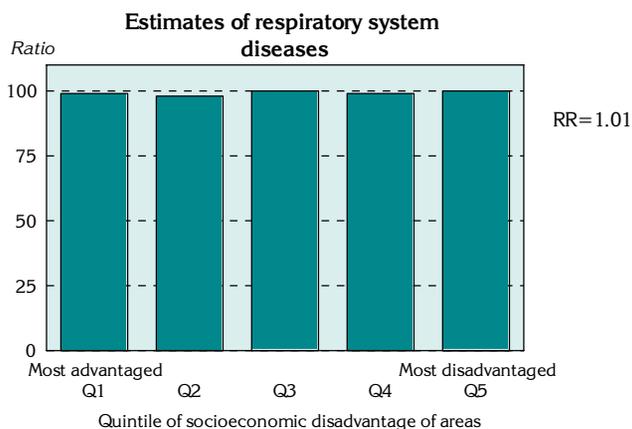
Central Northern had one per cent fewer people with respiratory diseases than expected from the rates for the combined metropolitan regions (a standardised ratio (SR) of 99\*\*, 267,533 people) (Table 38). There was very little variation at the SLA level in Central Northern, with SRs no more than six per cent above or below the average. The SLAs of Playford - Elizabeth and Port Adelaide Enfield - Coast had the highest ratios, with lower ratios in similarly disadvantaged SLAs elsewhere in the region (Map 37).

Playford SLAs all had elevated ratios, with Elizabeth recording the highest (an SR of 106\*\*, 9,513 people), followed by West Central (103\*, 4,623) and East Central (103\*, 6,846). There were also elevated ratios in Port Adelaide Enfield - Coast (104\*\*, 10,297) and Salisbury - Inner North (101, 8,868), West Torrens - West (101, 9,852) and Walkerville (101, 2,440).

A number of SLAs in the Central Northern region were estimated to have large numbers of people with respiratory system diseases: these included Salisbury - South-East (11,928 people, 99), Tea Tree Gully - South (11,684 people, 99), Charles Sturt - Coastal (11,085, 100), Port Adelaide Enfield - East (9,942, 100), Salisbury - Central (9,674, 99), Tea Tree Gully - Central (9,469, 99) and - North (9,180, 99).

SLAs with fewer people estimated as having respiratory system disease than expected included Campbelltown - East (an SR of 95\*\*, 9,204 people), Adelaide (96\*\*, 6,038), Salisbury Balance (96, 2,033), Charles Sturt - Inner West (96\*\*, 8,301), West Torrens - East (97\*\*, 8,258), Adelaide Hills - Ranges (98, 3,543), Campbelltown - West (98, 6,506), Charles Sturt - North-East (98\*, 8,789) and - Inner East (98, 7,455), Tea Tree Gully - Hills (98, 4,416), Burnside - North-East (98, 7,200), Playford - West (98, 2,896) and Port Adelaide Enfield - Port (98, 8,778).

There was only marginal variation across the quintiles of socioeconomic status in the estimated number of people reporting respiratory system diseases.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 37: Estimated prevalence of respiratory system diseases, CNAHS, 2001

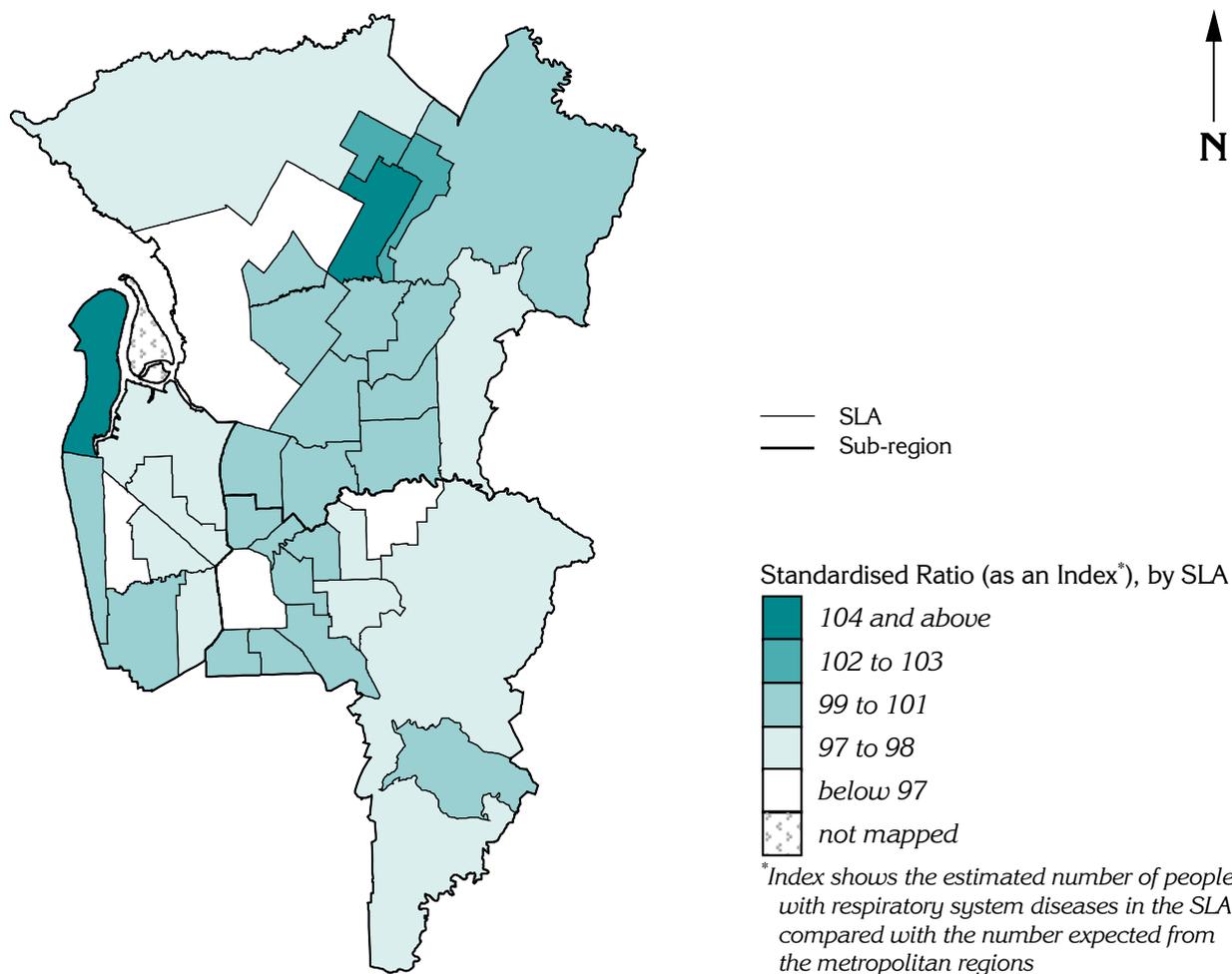


Table 38: Estimated prevalence of respiratory system diseases, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	49,277	362.4	99
Quintile 2	51,631	358.4	98**
Quintile 3	58,920	366.0	100
Quintile 4	48,524	360.2	99**
Quintile 5: most disadvantaged areas	59,180	366.6	100
<b>Rate ratio</b>	..	<b>1.01</b>	<b>1.01</b>
<b>Northern</b>	<b>116,984</b>	<b>365.5</b>	<b>100</b>
<b>Western</b>	<b>72,815</b>	<b>326.6</b>	<b>99*</b>
<b>Central East</b>	<b>77,734</b>	<b>359.4</b>	<b>98**</b>
<b>CNAHS</b>	<b>267,533</b>	<b>362.9</b>	<b>99**</b>
<b>Southern</b>	<b>115,356</b>	<b>370.7</b>	<b>101**</b>
<b>Metropolitan regions</b>	<b>382,890</b>	<b>365.2</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

## Estimated disease prevalence: Asthma

Estimated number of people who reported in the 2001 NHS having been told by a doctor or nurse they had asthma

### Overview

**Asthma is a disorder affecting the small airways of the lungs. People with asthma have very sensitive airways that narrow in response to certain "triggers", leading to difficulty in breathing. The airway narrowing is caused by inflammation and swelling of the airway lining, the tightening of the airway muscles, and the production of excess mucus. This results in a reduced airflow in and out of the lungs. Asthma is Australia's most widespread chronic (long-term and persistent) health problem. It affects over 2 million Australians: 1 in 4 children, 1 in 7 teenagers and 1 in 10 adults. At present the cause of asthma is not known and there is no cure. However, with appropriate management, most people with asthma can lead normal, active lives.**

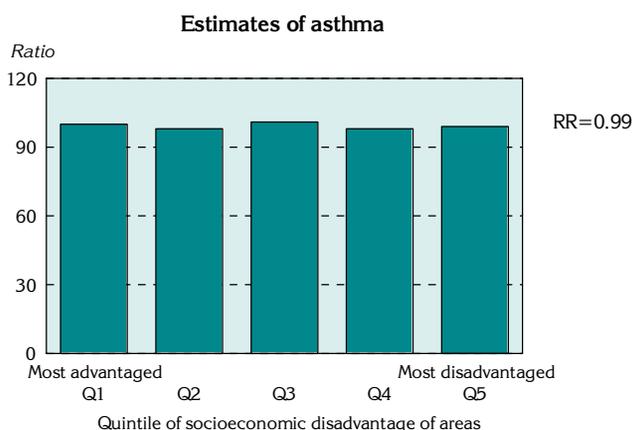
In Central Northern, 102,274 people were estimated to have asthma in 2001, one per cent fewer than expected from the metropolitan regions' rate (a standardised ratio (SR) of 99\*\*) (Table 39). A small number of SLAs had marginally elevated SRs in parts of the outer north and west (Map 38).

The most highly elevated ratio was mapped in Playford – Elizabeth, where eight per cent more people than expected were estimated to have asthma (an SR of 108\*\*, 3,804 people). Other SLAs with elevated ratios were Port Adelaide Enfield - Coast (105\*\*, 3,980), Playford - West Central (104, 1,911), Playford - East Central (102, 2,807), Charles Sturt - Coastal (102, 4,182), Walkerville (102, 919) and West Torrens - West (102, 3660).

Salisbury - South-East (4,607 people, an SR of 99), Tea Tree Gully - South (4,524, 100), - Central (3,762, 100), - North (3,744, 99), Port Adelaide Enfield - East (3,695, 99), Salisbury - Inner North (3,583, 99), - North-East (3,159, 99), Burnside - South-West (2,770, 101), Unley - East (2,553, 101), Port Adelaide Enfield - Inner (2,550, 99) and Prospect (2,518, 99) had high estimated numbers of people with asthma.

Ratios mapped in the lowest range included Campbelltown - East (an SR of 93\*\*, 3,469 people), Salisbury Balance (93\*, 805), Port Adelaide Enfield - Port (94\*\*, 3,170), Adelaide (94\*\*, 2,126), Charles Sturt - North East (94\*\*, 3,219) and - Inner West (94\*\*, 3,070), Playford - West (96, 1,133), West Torrens - East (96\*, 2,996), Salisbury - Central (96\*, 3,765), Charles Sturt - Inner East (97, 2,746), Adelaide Hills - Ranges (97, 1,387), Campbelltown - West (97, 2,408) and Burnside - North-East (98, 2,713).

There was only marginal variation across the quintiles of socioeconomic status in the estimated number of people reporting asthma.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 38: Estimated prevalence of asthma, CNAHS, 2001

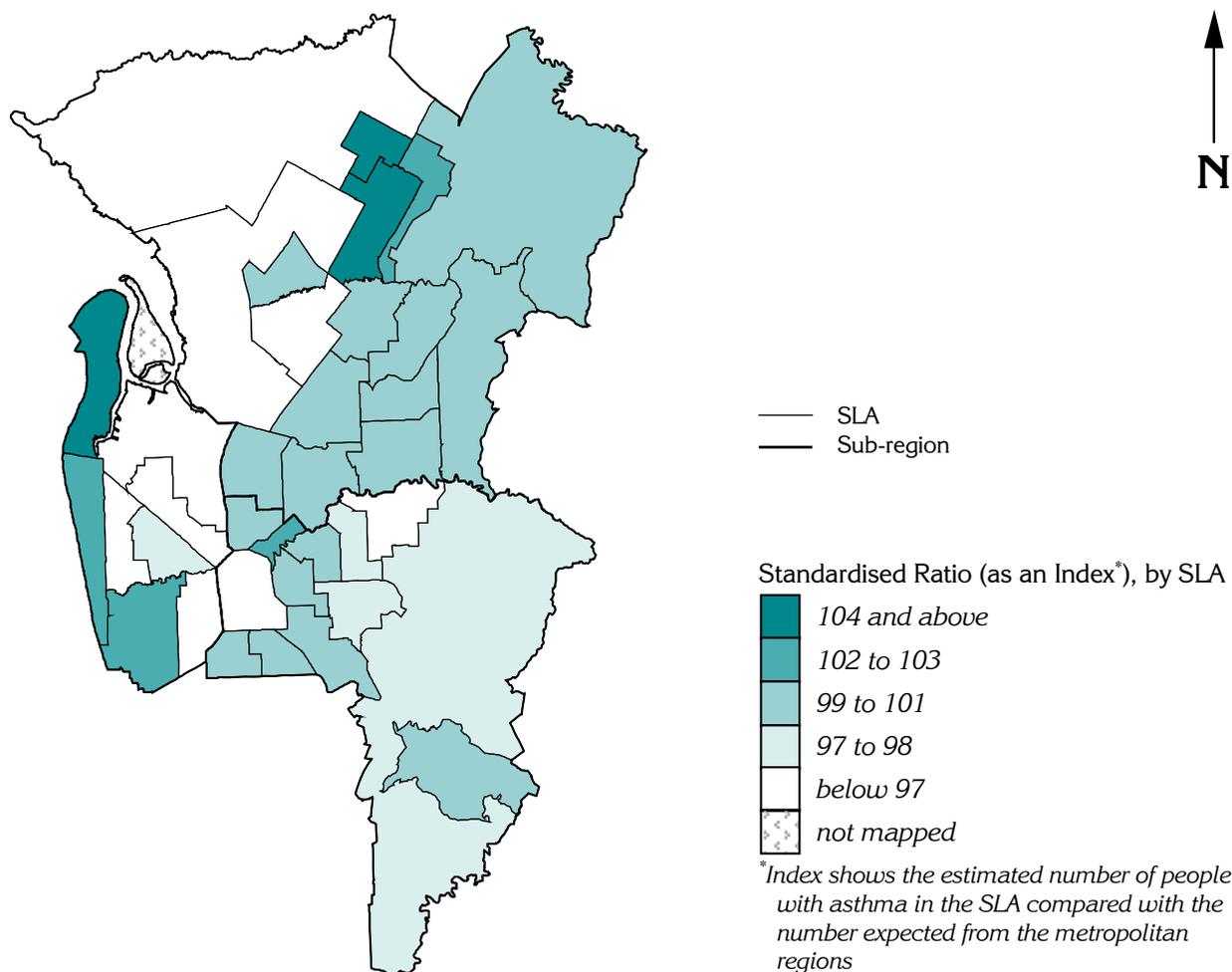


Table 39: Estimated prevalence of asthma, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	18,859	140.3	100
Quintile 2	19,801	137.6	98**
Quintile 3	22,397	141.3	101
Quintile 4	18,410	137.1	98**
Quintile 5: most disadvantaged areas	22,808	138.4	99*
<b>Rate ratio</b>	<b>..</b>	<b>0.99</b>	<b>0.99</b>
<b>Northern</b>	<b>46,007</b>	<b>140.2</b>	<b>100</b>
<b>Western</b>	<b>27,023</b>	<b>137.9</b>	<b>98**</b>
<b>Central East</b>	<b>29,244</b>	<b>138.0</b>	<b>98**</b>
<b>CNAHS</b>	<b>102,274</b>	<b>139.0</b>	<b>99**</b>
<b>Southern</b>	<b>44,835</b>	<b>143.5</b>	<b>102**</b>
<b>Metropolitan regions</b>	<b>147,109</b>	<b>140.3</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated disease prevalence: Circulatory system diseases

Estimated number of people who reported in the 2001 NHS having been told by a doctor or nurse they had circulatory system diseases

## Overview

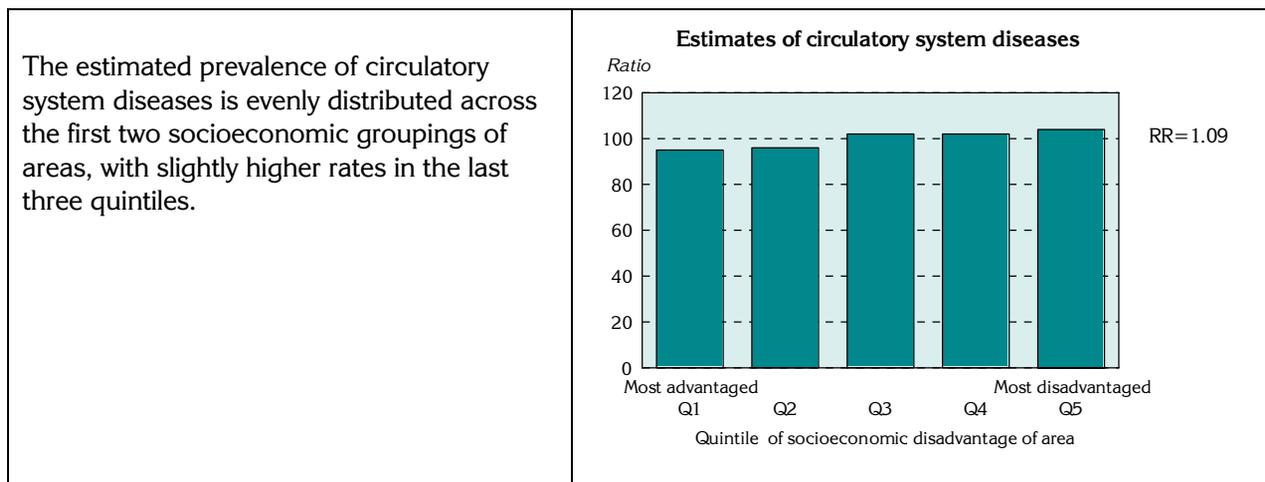
**Chronic circulatory system diseases are chronic diseases affecting the cardiovascular system. These include ischaemic or coronary heart disease, cerebrovascular accident or stroke, hypertension (high blood pressure) and rheumatic heart disease. These diseases kill more Australians every year than any other health condition and are responsible for enormous health care costs. Within the Australian population, certain population groups are at increased risk for developing and dying from cardiovascular conditions. These groups include Indigenous Australians, people of lower socioeconomic status, males over the age of 45 years and males in rural and remote areas <sup>69</sup>.**

An estimated 134,751 people in Central Northern had circulatory system diseases, an SR of 100 (Table 40). Elevated standardised ratios (SRs) were mapped in parts of the west and outer north, with low ratios in the east and south-east (Map 39).

The most highly elevated ratio was in Salisbury - Inner North, with eleven per cent more people estimated to have circulatory system diseases than expected (an SR of 111<sup>\*\*</sup>, 3,221 people). There were also elevated ratios in Playford - West Central (109<sup>\*\*</sup>, 1,887) and - East Central (109<sup>\*\*</sup>, 2,527), Port Adelaide Enfield - Coast (108<sup>\*\*</sup>, 5,620), West Torrens - West (104<sup>\*\*</sup>, 6,297), Charles Sturt - North-East (104<sup>\*</sup>, 4,733), Port Adelaide Enfield - East (104<sup>\*\*</sup>, 5,481) Playford - Elizabeth (104<sup>\*</sup>, 4,960) and West Torrens - East (103, 4,463).

There were large numbers of people with circulatory system diseases in Charles Sturt - Inner West (5,086, 101), Port Adelaide Enfield - Port (4,875, 101), Salisbury - Central (4,272, 101) and Campbelltown - West (4,003, 99).

A number of SLAs were mapped in the lowest range, including Adelaide (an SR of 91<sup>\*\*</sup>, 2,801 people), Burnside - North-East (93<sup>\*\*</sup>, 3,973), Adelaide Hills - Ranges (93<sup>\*\*</sup>, 1,528), Tea Tree Gully - Hills (93<sup>\*\*</sup>, 1,983), Campbelltown - East (94<sup>\*\*</sup>, 4,594), Adelaide Hills - Central (95<sup>\*</sup>, 1,969), Walkerville (95<sup>\*\*</sup>, 1,444), Playford - West (95, 1,201), Burnside - South-West (95<sup>\*\*</sup>, 4,124), Norwood Payneham and St Peters - West (95<sup>\*\*</sup>, 2,978), Tea Tree Gully - North (96<sup>\*</sup>, 3,149), - South (96<sup>\*\*</sup>, 5,757), Charles Sturt - Coastal (96<sup>\*\*</sup>, 6,240) and Tea Tree Gully - Central (97, 3,910).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 39: Estimated prevalence of circulatory system diseases, CNAHS, 2001

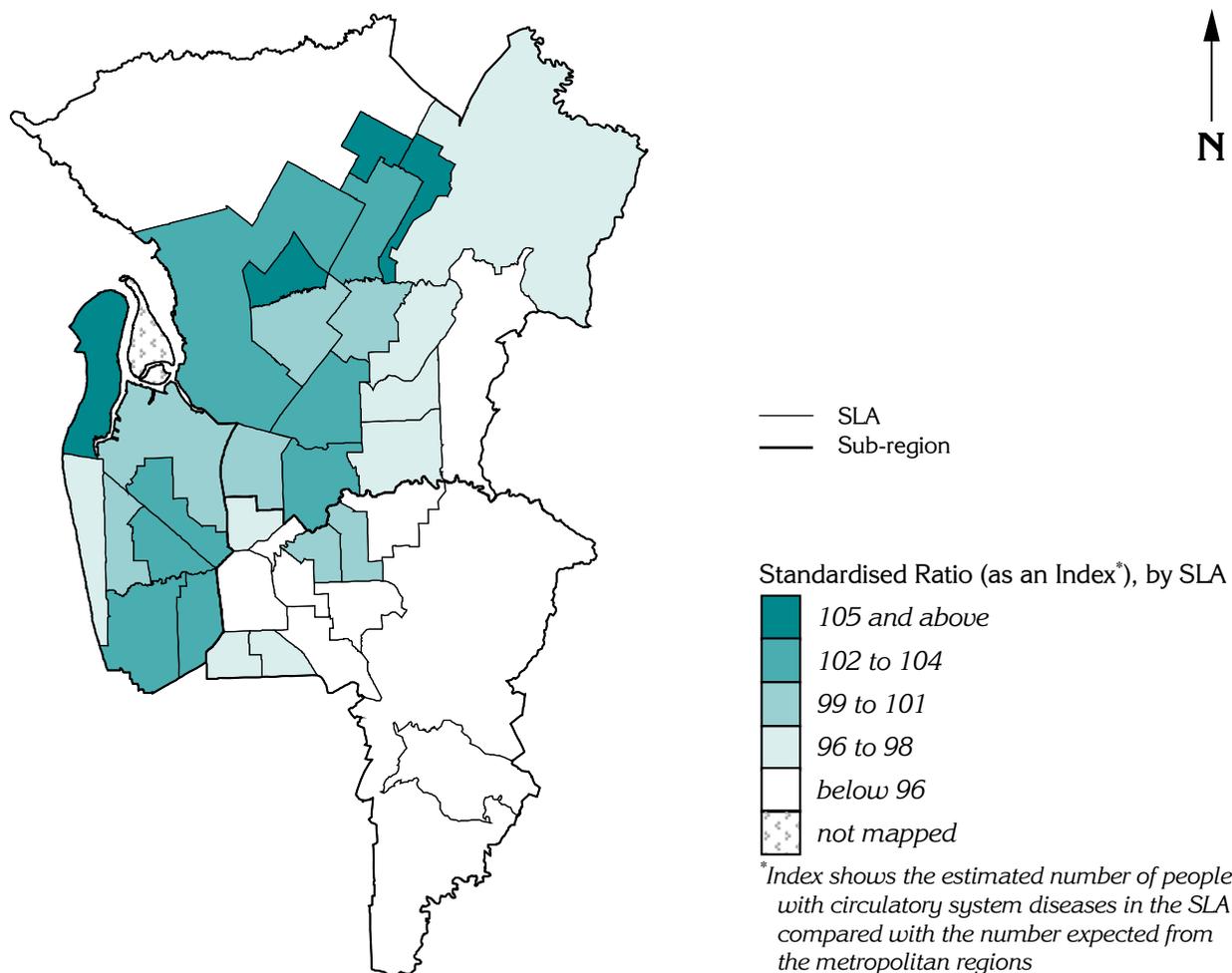


Table 40: Estimated prevalence of circulatory system diseases, CNAHS, 2001

Area	Number	Rate <sup>*</sup>	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	24,758	175.0	95 <sup>**</sup>
Quintile 2	23,841	176.0	96 <sup>**</sup>
Quintile 3	32,023	188.0	102 <sup>**</sup>
Quintile 4	25,497	187.2	102 <sup>**</sup>
Quintile 5: most disadvantaged areas	28,631	190.6	104 <sup>**</sup>
<b>Rate ratio</b>	<b>..</b>	<b>1.09</b>	<b>1.09<sup>**</sup></b>
<b>Northern</b>	<b>52,717</b>	<b>186.3</b>	<b>101<sup>**</sup></b>
<b>Western</b>	<b>41,768</b>	<b>187.9</b>	<b>102<sup>**</sup></b>
<b>Central East</b>	<b>40,266</b>	<b>176.3</b>	<b>95<sup>**</sup></b>
<b>CNAHS</b>	<b>134,751</b>	<b>183.7</b>	<b>100</b>
<b>Southern</b>	<b>58,301</b>	<b>185.3</b>	<b>101</b>
<b>Metropolitan regions</b>	<b>193,052</b>	<b>184.1</b>	<b>100</b>

<sup>\*</sup>Rate per 1,000 population

<sup>\*</sup> indicates statistical significance: see page 19

## Estimated disease prevalence: Diabetes type 2

Estimated number of people who reported in the 2001 NHS having been told by a doctor or nurse they had diabetes type 2

### Overview

**Diabetes type 2 diabetes is the commonest form of diabetes. It affects 85 to 90 per cent of all people with diabetes. While it usually affects mature adults, younger people are also now being diagnosed in greater numbers as rates of overweight and obesity increase. It is strongly associated with high blood pressure, high cholesterol and excessive weight. Type 2 diabetes was previously called non-insulin dependent diabetes or mature onset diabetes. The causes of type 2 diabetes are known and in some cases, it can be prevented. However there is currently no cure for type 2 diabetes.**

The Central Northern region had an estimated 19,165 people with diabetes type 2 in 2001, standardised ratio (SR) of 102\*\* (Table 41). SLAs with elevated ratios covered much of the north and north-west, as well as parts of the west and outer north (Map 40), following the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

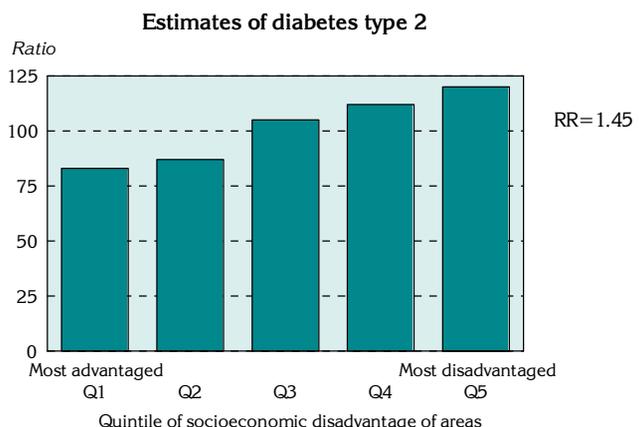
The majority of SLAs with elevated ratios were concentrated in groups, with all or most SLAs having elevated SRs in Salisbury, Port Adelaide Enfield, Charles Sturt and Playford. The Salisbury SLAs were - Inner North (an SR of 128\*\*, 480 people), - Balance (117, 102), - Central (112\*\*, 656), - South-East (109\*\*, 887) and - North-East (109, 534). In Port Adelaide Enfield, elevated SRs were recorded for - Port (127\*\*, 835 people), - Inner (117\*\*, 618), - Coast (112\*\*, 809), and - East (112\*\*, 822). Elevated SRs in Charles Sturt were recorded for - North-East (126\*\*, 779 people), - Inner West (117\*\*, 841) and - Inner East (117\*\*, 704). The Playford SLAs of - East Central (with an SR of 121\*\*, 369 people), - West Central (an SR of 120\*\*, 284 people) and - Elizabeth (116\*\*, 765) all had more people with diabetes type 2 than expected from the metropolitan rates. There were also elevated ratios in West Torrens - East (an SR of 125\*\*, 733 people) and Campbelltown - West (114\*\*, 643).

Relatively large numbers of people with diabetes type 2 were estimated for West Torrens - West (805 people, an SR of 95) and Campbelltown - East (660, 92).

The SLAs with low ratios included Adelaide Hills - Ranges (an SR of 71\*\*, 167 people) and - Central (76\*\*, 225), Adelaide (75\*\*, 329), Tea Tree Gully - Hills (77\*\*, 247) and - North (79\*\*, 341), Playford - Hills (80, 48), Burnside - South-West (83\*\*, 509), Walkerville (83\*, 183), Tea Tree Gully - Central (86\*\*, 483), Unley - West (86\*\*, 346), Burnside - North-East (87\*\*, 527), Unley - East (87\*\*, 427), Tea Tree Gully - South (88\*\*, 760), Charles Sturt - Coastal (89\*\*, 822) and Norwood Payneham and St Peters - West (89\*, 382).

There was a distinct socioeconomic gradient in the estimates for diabetes type 2.

Those in the most disadvantaged areas were 45% more likely to have diabetes type 2 than those in the most advantaged areas.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 40: Estimated prevalence of diabetes type 2, CNAHS, 2001

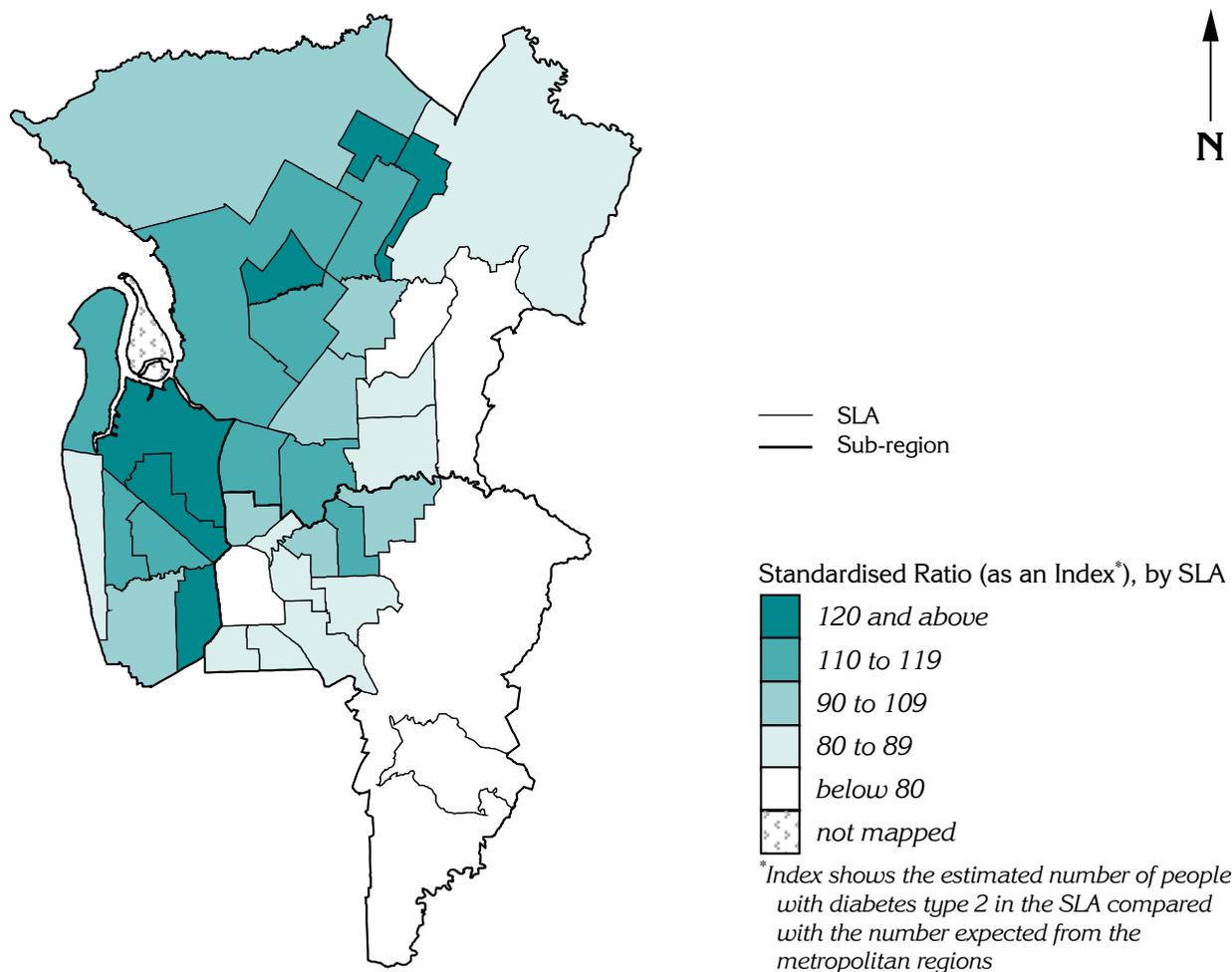


Table 41: Estimated prevalence of diabetes type 2, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	3,061	21.3	83**
Quintile 2	3,038	22.2	87**
Quintile 3	4,588	26.9	105**
Quintile 4	3,960	28.7	112**
Quintile 5: most disadvantaged areas	4,518	30.8	120**
<b>Rate ratio</b>	..	<b>1.45</b>	<b>1.45**</b>
<b>Northern</b>	<b>7,566</b>	<b>26.8</b>	<b>105**</b>
<b>Western</b>	<b>6,330</b>	<b>28.5</b>	<b>111**</b>
<b>Central East</b>	<b>5,269</b>	<b>22.8</b>	<b>88**</b>
<b>CNAHS</b>	<b>19,165</b>	<b>26.1</b>	<b>102*</b>
<b>Southern</b>	<b>7,683</b>	<b>24.5</b>	<b>96**</b>
<b>Metropolitan regions</b>	<b>26,848</b>	<b>25.6</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated disease prevalence: Mental and behavioural disorders

Estimated number of people who reported in the 2001 NHS having mental or behavioural disorders

## Overview

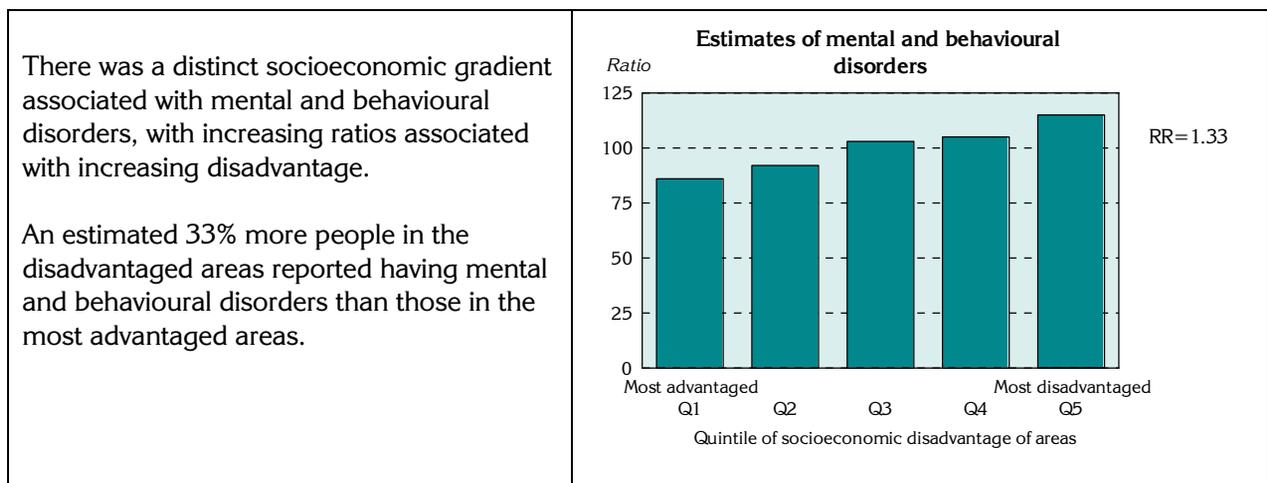
**A diverse range of social, environmental, biological and psychological factors can impact on an individual’s mental health. In turn, people can develop symptoms and behaviours that are distressing to themselves or others, and interfere with their social functioning and capacity to negotiate daily life. These symptoms and behaviours may require treatment or rehabilitation, and sometimes, hospitalisation. Chronic mental health conditions can affect young people as well as adults, and may require a range of community-based or institutional interventions, depending on the severity of the episode.**

Central Northern had a standardised ratio (SR) of 101\*\*, representing 79,229 people who reported mental and behavioural disorders as chronic conditions (Table 42). The most highly elevated ratios were mapped in the inner northern, north-western, western and outer northern SLAs, with low ratios in the east and south-east (Map 41), following the pattern of socioeconomic disadvantage (Map 23, page 113).

There were estimated to be nearly one third more than the expected number in Playford - Elizabeth (an SR of 130\*\*, 3,339 people). Other SLAs with elevated ratios included Port Adelaide Enfield - Port (an SR of 121\*\*, 3,112 people) and - Inner (118\*\*, 2,291), Playford - West Central (117\*\*, 1,553), Charles Sturt - North-East (111\*\*, 2,911), West Torrens - East (110\*\*, 2,645), Port Adelaide Enfield - East (110\*\*, 3,139) and - Coast (109\*\*, 3,199), Salisbury - Inner North (109\*\*, 2,884) and Central (107\*\*, 3,115), Charles Sturt - Inner East (108\*\*, 2,342) and Inner West (106\*\*, 2,635), Norwood Payneham and St Peters - East (105\*, 1,631) and West Torrens - West (105\*\*, 2,910).

There were estimated to be large numbers of people with mental and behavioural disorders in the SLAs of Salisbury - South-East (3,653 people, an SR of 104\*), Tea Tree Gully - South (3,258, 95\*\*), Charles Sturt - Coastal (3,049, 96\*\*), Campbelltown - East (2,609, 91\*\*) and Tea Tree Gully - Central (2,575, 91\*\*).

The SLAs of Adelaide Hills - Ranges (with an SR of 78\*\*, 868 people) and - Central (81\*\*, 1,104), Burnside - North-East (82\*\*, 1,753) and - South-West (83\*\*, 1,765), Tea Tree Gully - North (85\*\*, 2,433) and - Hills (85\*\*, 1,145), Playford - Hills (86\*, 275) and Walkerville (87\*\*, 608) all had ratios below the level expected from the metropolitan rates.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 41: Estimated prevalence of mental and behavioural disorders, CNAHS, 2001

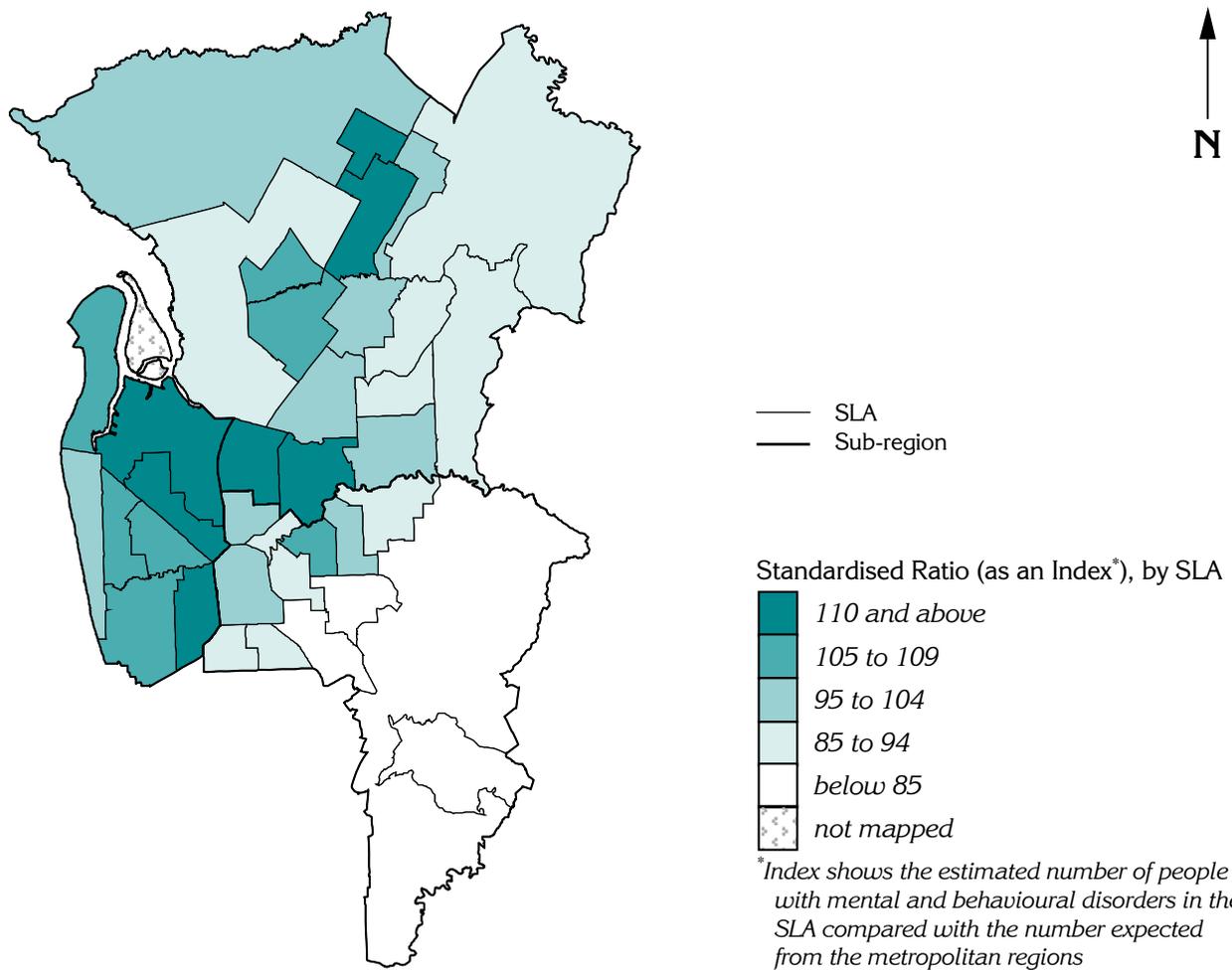


Table 42: Estimated prevalence of mental and behavioural disorders, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	12,538	92.1	86**
Quintile 2	14,251	98.4	92**
Quintile 3	17,589	110.3	103**
Quintile 4	15,048	112.1	105**
Quintile 5: most disadvantaged areas	19,804	122.7	115**
<b>Rate ratio</b>	..	<b>1.33</b>	<b>1.33**</b>
<b>Northern</b>	<b>35,542</b>	<b>109.8</b>	<b>103**</b>
<b>Western</b>	<b>22,804</b>	<b>115.2</b>	<b>108**</b>
<b>Central East</b>	<b>20,883</b>	<b>97.3</b>	<b>90**</b>
<b>CNAHS</b>	<b>79,229</b>	<b>107.6</b>	<b>101*</b>
<b>Southern</b>	<b>32,584</b>	<b>104.3</b>	<b>98**</b>
<b>Metropolitan regions</b>	<b>111,814</b>	<b>106.7</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated disease prevalence: Musculoskeletal system diseases

Estimated number of people who reported in the 2001 NHS reporting a musculoskeletal system disease

## Overview

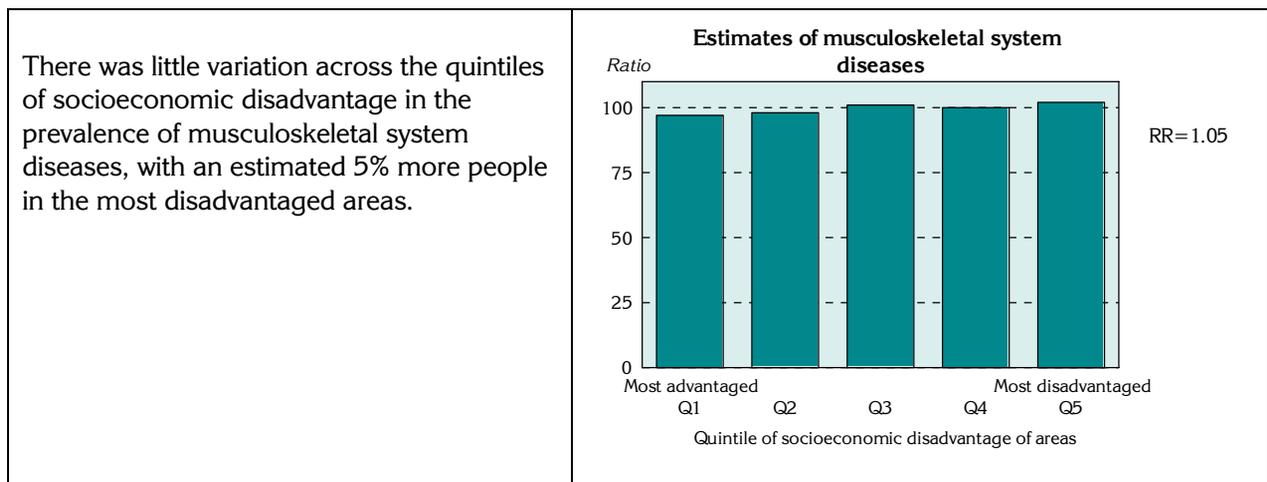
**Chronic musculoskeletal system diseases are chronic disorders of the muscles and bones. They include osteoarthritis and osteoporosis. More than 6.1 million Australians are reported to have arthritis or a musculoskeletal condition. Most commonly reported conditions are back pain and various forms of arthritis. Almost 1.2 million of these are reported to have disability associated with their condition <sup>70</sup>. Highly prevalent, they place a significant burden on the community, both economic and personal, including the use of hospital and primary care services, disruptions to daily life and lost productivity through disability <sup>70</sup>.**

There were 258,446 people estimated as having musculoskeletal system diseases in 2001, two per cent fewer than expected (a standardised ratio (SR) of 98\*\*) (Table 43). None of the standardised ratios in the Central Northern SLAs were highly elevated. Ratios above average were mapped in a small number of north-west and outer northern SLAs, with those below average in the east (Map 42), generally following the pattern of socioeconomic disadvantage shown in Map 23, page 113.

The SLAs with the slightly elevated ratios, or a ratio of 100 included Playford - West Central (an SR of 103\*, 3,913 people), Port Adelaide Enfield - Coast (102\*, 10,163), Playford - Elizabeth (102\*, 8,919), Salisbury - Inner North (101, 7,195), West Torrens - West (101, 10,607), Port Adelaide Enfield - Inner (101, 7,075), Norwood Payneham and St Peters - East (100, 5,924), Charles Sturt - Inner East (100, 7,877), Salisbury - Central (100, 8,894), Playford - East Central (100, 5,502), Port Adelaide Enfield - Port (100, 8,922) and Salisbury - South-East (100, 11,311).

Large numbers of people with musculoskeletal system diseases were mapped in Charles Sturt - Coastal (11,455 people, an SR of 98), Tea Tree Gully - South (11,309, 97\*), Port Adelaide Enfield - East (9,939, 99), Charles Sturt - Inner West (8,874, 99) and - North-East (8,804, 99), Tea Tree Gully - Central (8,482, 97\*\*) and West Torrens - East (8,402, 98).

The SLAs with the lowest ratios included Adelaide (90\*\*, 5,815 people), Adelaide Hills - Ranges (94\*\*, 3,194), Norwood Payneham and St Peters - West (96\*\*, 5,948), Burnside - North-East (95\*\*, 7,269), Adelaide Hills - Central (95\*\*, 4,048), Tea Tree Gully - Hills (95\*\*, 4,110), Campbelltown - East (96\*\*, 9,097), Unley - East (96\*\*, 6,593), Burnside - South-West (96\*\*, 7,388), Walkerville (96\*, 2,529), Tea Tree Gully - North (96\*\*, 7,533) and Unley - West (96\*\*, 5,626).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 42: Estimated prevalence of musculoskeletal system diseases, CNAHS, 2001

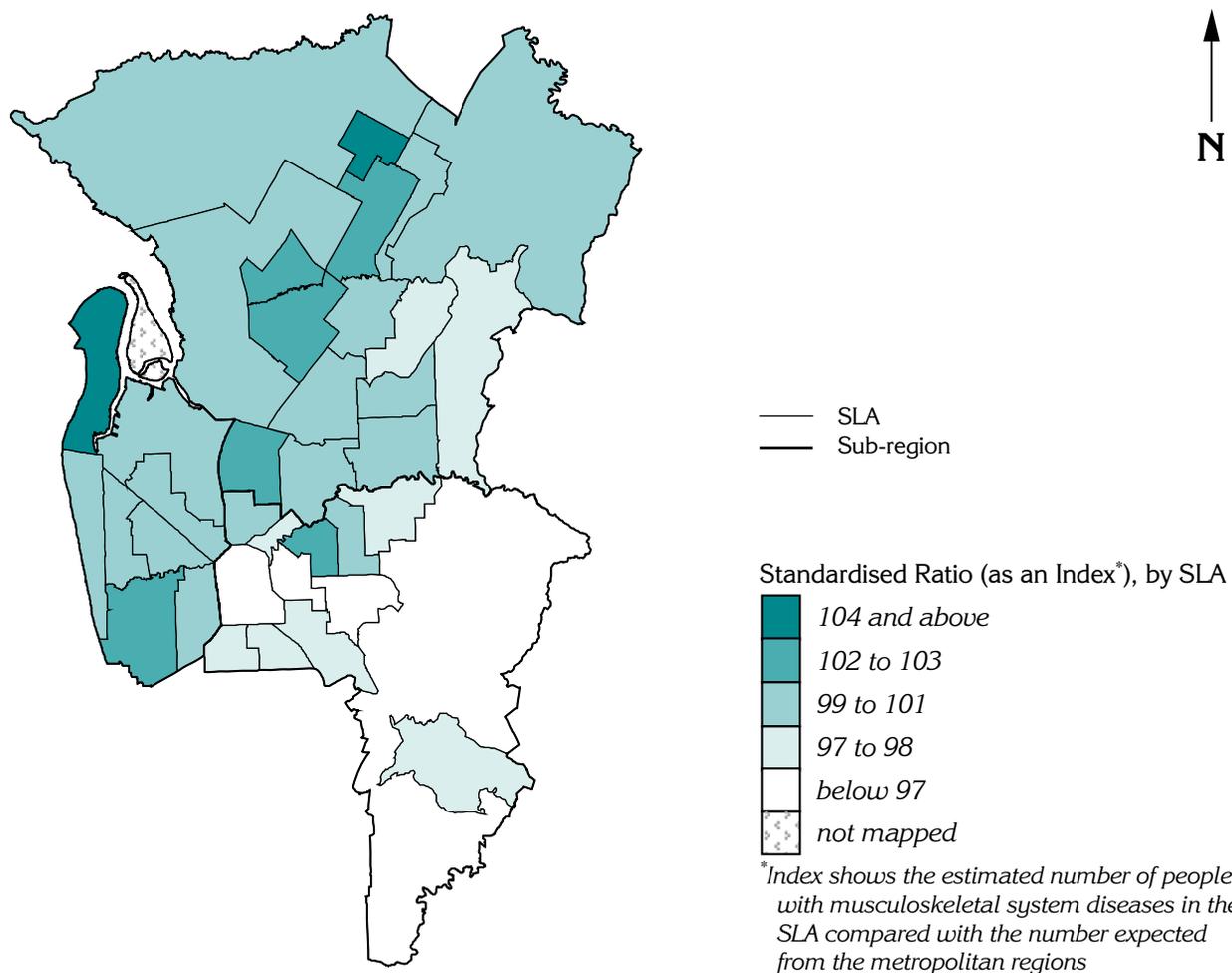


Table 43: Estimated prevalence of musculoskeletal system diseases, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	47,588	341.1	97**
Quintile 2	48,736	343.3	98**
Quintile 3	58,880	355.5	101**
Quintile 4	47,840	353.2	100
Quintile 5: most disadvantaged areas	55,402	358.7	102**
<b>Rate ratio</b>	..	<b>1.05</b>	<b>1.05**</b>
<b>Northern</b>	<b>106,582</b>	<b>353.5</b>	<b>101</b>
<b>Western</b>	<b>75,094</b>	<b>355.6</b>	<b>101**</b>
<b>Central East</b>	<b>76,770</b>	<b>342.2</b>	<b>97**</b>
<b>CNAHS</b>	<b>258,446</b>	<b>350.6</b>	<b>100</b>
<b>Southern</b>	<b>110,101</b>	<b>353.7</b>	<b>101*</b>
<b>Metropolitan regions</b>	<b>368,546</b>	<b>351.5</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated disease prevalence: Arthritis

Estimated number of people who reported in the 2001 NHS having arthritis

## Overview

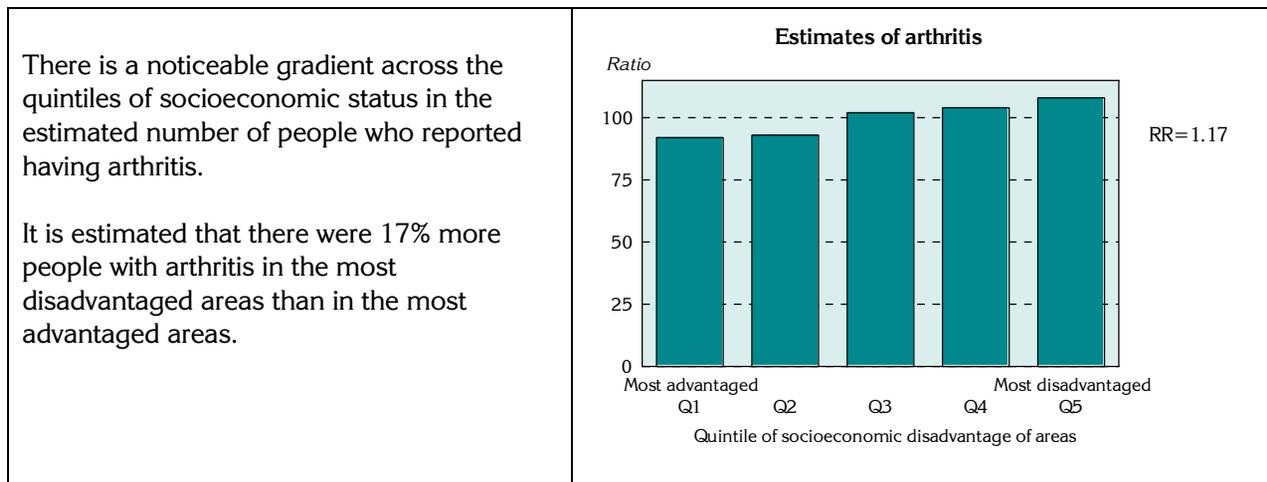
**Arthritis is a term used to refer to the many disorders of one or more joints. The commonest forms of arthritis are osteoarthritis. Their prevalence increases sharply with age, and females are more likely to be affected than males. Arthritis is the commonest chronic condition, affecting almost 15% of the Australian population <sup>70</sup>.**

In Central Northern, 110,216 people were estimated to have arthritis (a standardised ratio (SR) of 100) (Table 44). The highest ratios were in a small number of outer northern and north-western SLAs (with elevated ratio covering much of the western, north-western and inner northern suburbs), with low ratios in the east (Map 43), generally following the pattern of socioeconomic disadvantage shown in Map 23, page 113. The standardised ratios cover a wider range than do those for musculoskeletal system diseases (above).

Playford - West Central (1,591 people) and Salisbury - Inner North (2,653 people) both had ratios of 113<sup>\*\*</sup>, indicating 13% more people with arthritis than expected from the State rates. Other SLAs with elevated SRs included Port Adelaide Enfield - Coast (110<sup>\*\*</sup>, 4,642 people), - Port (107<sup>\*\*</sup>, 4,215), - Inner (107<sup>\*\*</sup>, 3,392) and - East (106<sup>\*\*</sup>, 4,577), Playford - Elizabeth (109<sup>\*\*</sup>, 4,200) and - East Central (108<sup>\*\*</sup>, 2,042), Charles Sturt - North East (107<sup>\*\*</sup>, 3,985) and - Inner East (105<sup>\*\*</sup>, 3,739), Salisbury - Central (106<sup>\*\*</sup>, 3,653) and - South-East (105<sup>\*\*</sup>, 4,797).

Large numbers of people with arthritis were estimated in the SLAs of Charles Sturt - Coastal (5,064 people, an SR of 96<sup>\*\*</sup>), West Torrens - West (4,921, 100), Tea Tree Gully - South (4,686, 96<sup>\*\*</sup>), Charles Sturt - Inner West (4,256, 104<sup>\*</sup>), West Torrens - East (3,753, 104<sup>\*</sup>), Campbelltown - West (3,178, 96<sup>\*</sup>) and Tea Tree Gully - Central (3,138, 95<sup>\*\*</sup>).

The SLAs estimated to have fewer people with arthritis than expected included Adelaide (an SR of 86<sup>\*\*</sup>, 2,215 people), Adelaide Hills - Ranges (88<sup>\*\*</sup>, 1,163) and - Central (90<sup>\*\*</sup>, 1,518), Burnside - North-East (90<sup>\*\*</sup>, 3,138) and - South-West (92<sup>\*\*</sup>, 3,231), Tea Tree Gully - Hills (91<sup>\*\*</sup>, 1,590) and - North (91<sup>\*\*</sup>, 2,427), Playford - Hills (92, 313), Campbelltown - East (92<sup>\*\*</sup>, 3,729) and Norwood Payneham and St Peters - West (92<sup>\*\*</sup>, 2,393).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 43: Estimated prevalence of arthritis, CNAHS, 2001

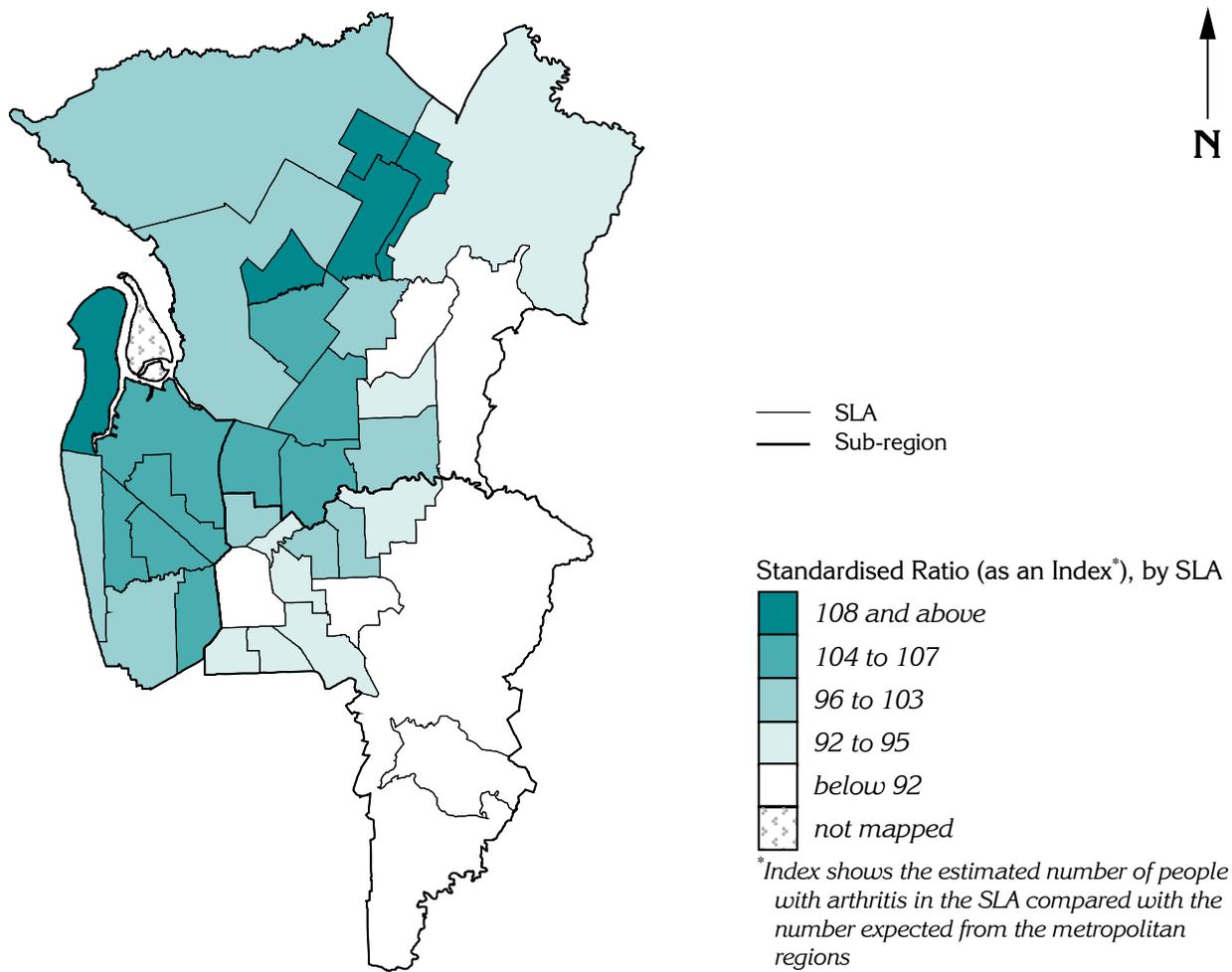


Table 44: Estimated prevalence of arthritis, CNAHS, 2001

Area	Number	Rate <sup>*</sup>	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	19,572	137.9	92 <sup>**</sup>
Quintile 2	19,094	139.8	93 <sup>**</sup>
Quintile 3	25,987	152.3	102 <sup>*</sup>
Quintile 4	21,321	156.4	104 <sup>**</sup>
Quintile 5: most disadvantaged areas	24,243	161.8	108 <sup>**</sup>
<b>Rate ratio</b>	<b>..</b>	<b>1.17</b>	<b>1.17<sup>**</sup></b>
<b>Northern</b>	<b>43,564</b>	<b>153.9</b>	<b>103<sup>**</sup></b>
<b>Western</b>	<b>34,557</b>	<b>155.5</b>	<b>104<sup>**</sup></b>
<b>Central East</b>	<b>32,096</b>	<b>139.5</b>	<b>92<sup>**</sup></b>
<b>CNAHS</b>	<b>110,216</b>	<b>149.9</b>	<b>100</b>
<b>Southern</b>	<b>46,998</b>	<b>150.2</b>	<b>100</b>
<b>Metropolitan regions</b>	<b>157,214</b>	<b>150.0</b>	<b>100</b>

<sup>\*</sup>Rate per 1,000 population

<sup>\*</sup> indicates statistical significance: see page 19

# Estimated disease prevalence: Osteoarthritis

Estimated number of females who reported in the 2001 NHS having been told by a doctor or nurse they had osteoarthritis

## Overview

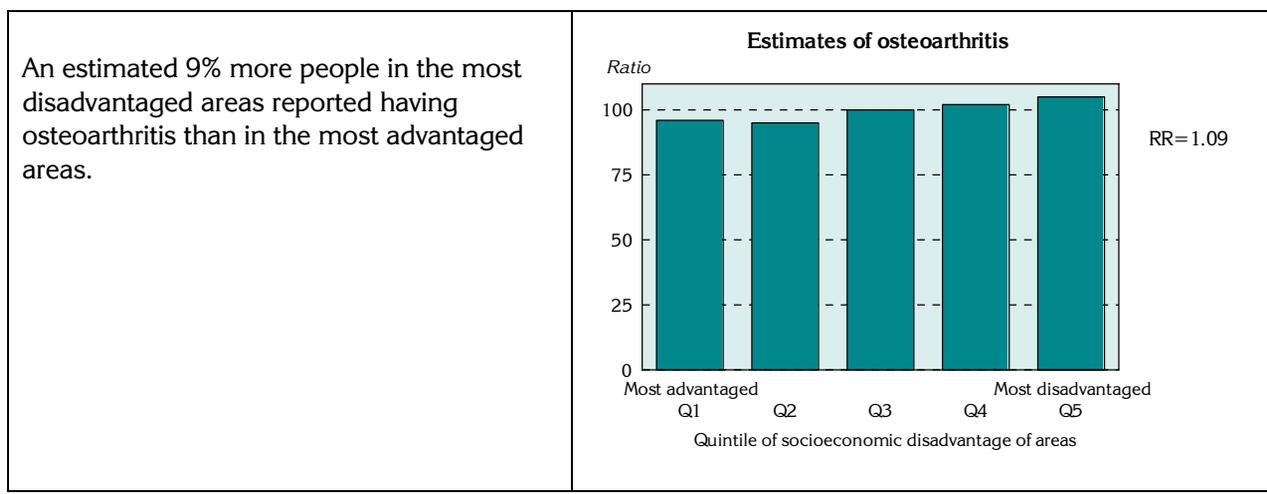
**Osteoarthritis is the commonest type of arthritis. It affects the cartilage in the joints. Cartilage cushions the ends of bones, where bones meet to form a joint. In osteoarthritis this cartilage degenerates. Osteoarthritis is most commonly found in the knees, neck, lower back, hip and fingers. Weight loss, strength training and exercise to strengthen bones and muscles can provide relief for many osteoarthritis sufferers and delay progression of the disorder. New pharmaceuticals and joint replacement procedures have also improved the quality of life for many with arthritis <sup>70</sup>.**

In Central Northern, 61,253 people were estimated to have osteoarthritis, one per cent fewer than expected (a standardised ratio (SR) of 99) (Table 45). The highest ratios were in the outer north and two SLAs in the north-west and north-east, with low ratios to the east of the city (Map 44), generally following the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

Playford - West Central (an SR of 123<sup>\*\*</sup>, 915 people), - East Central (116<sup>\*\*</sup>, 1,137) and - Elizabeth (114<sup>\*\*</sup>, 2,484) all had highly elevated SRs. Salisbury - Inner North (114<sup>\*\*</sup>, 1,362 people) and - North-East (106<sup>\*</sup>, 1,618) also had elevated ratios, as did Port Adelaide Enfield - Coast (109<sup>\*\*</sup>, 2,612) and - East (106<sup>\*\*</sup>, 2,544).

Large numbers of people with osteoarthritis were estimated for the populations of Charles Sturt - Coastal (2,903 people, an SR of 96), West Torrens - West (2,771, 97), Salisbury - South-East (2,576, 104<sup>\*</sup>), Charles Sturt - Inner West (2,294, 98), Port Adelaide Enfield - Port (2,177, 97), Charles Sturt - North-East (2,089, 99), West Torrens - East (2,036, 101), Charles Sturt - Inner East (2,028, 99), Burnside - South-West (1,980, 97), Salisbury - Central (1,913, 102) and Port Adelaide Enfield - Inner (1,877, 102).

Ratios below average were estimated for the SLAs of Campbelltown - East (an SR of 89<sup>\*\*</sup>, 1,980 people) and - West (92<sup>\*\*</sup>, 1,754), Playford - West (91<sup>\*</sup>, 500), Tea Tree Gully - Hills (93<sup>\*</sup>, 876), Adelaide Hills - Ranges (93, 667), Burnside - North-East (93<sup>\*\*</sup>, 1,877), Prospect (94<sup>\*</sup>, 1,381), Adelaide Hills - Central (95, 875) and Tea Tree Gully - South (95<sup>\*\*</sup>, 2,577).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 44: Estimated prevalence of osteoarthritis, CNAHS, 2001

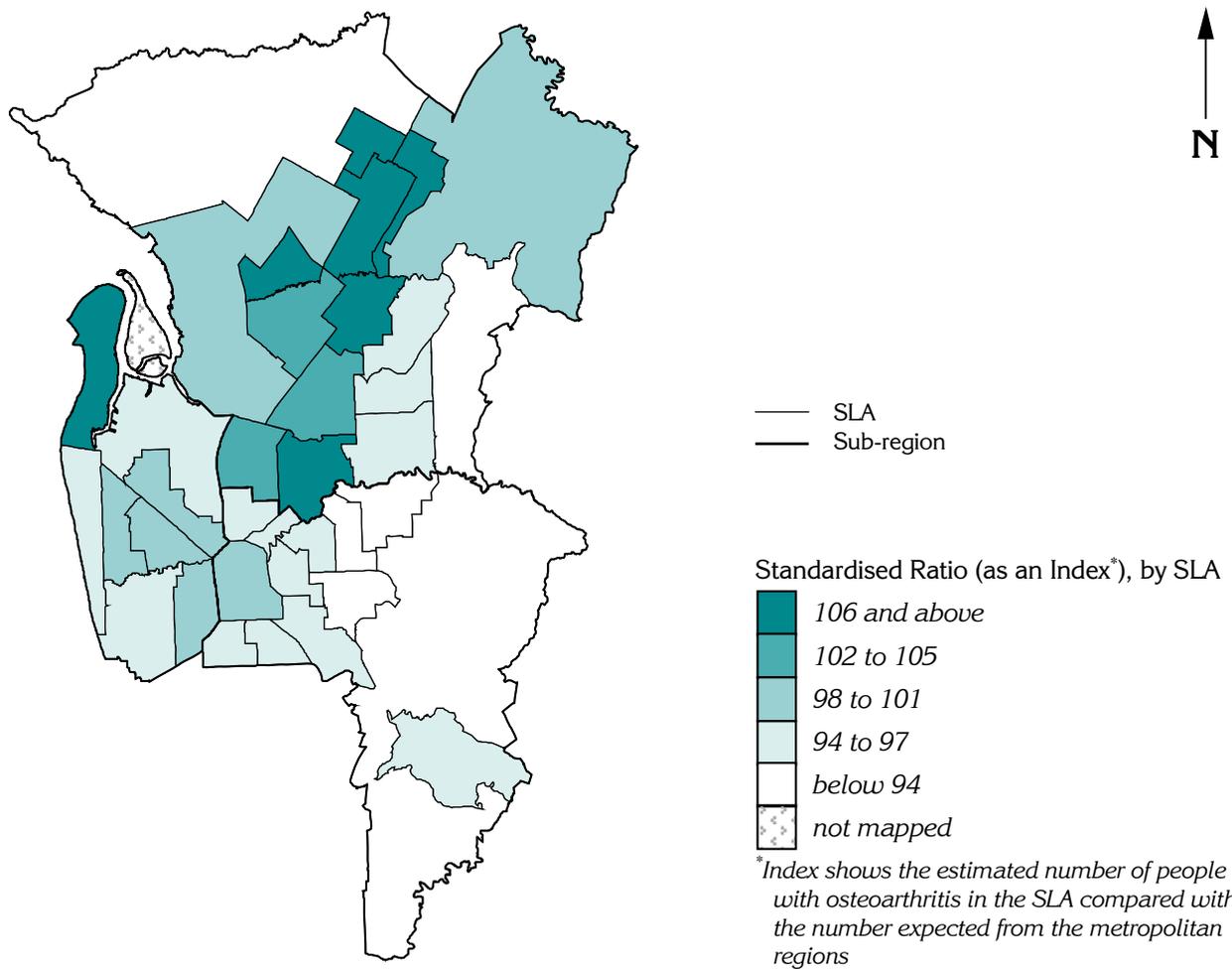


Table 45: Estimated prevalence of osteoarthritis, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	11,491	80.4	96**
Quintile 2	10,667	79.7	95**
Quintile 3	14,442	83.7	100
Quintile 4	11,560	85.4	102
Quintile 5: most disadvantaged areas	13,093	88.0	105**
<b>Rate ratio</b>	..	<b>1.09</b>	<b>1.09**</b>
<b>Northern</b>	<b>23,851</b>	<b>86.9</b>	<b>104**</b>
<b>Western</b>	<b>18,911</b>	<b>83.4</b>	<b>99</b>
<b>Central East</b>	<b>18,491</b>	<b>79.7</b>	<b>95**</b>
<b>CNAHS</b>	<b>61,253</b>	<b>83.5</b>	<b>99</b>
<b>Southern</b>	<b>26,790</b>	<b>85.0</b>	<b>101*</b>
<b>Metropolitan regions</b>	<b>88,044</b>	<b>84.0</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated disease prevalence: Females with osteoporosis

Estimated number of females who reported in the 2001 NHS having osteoporosis

## Overview

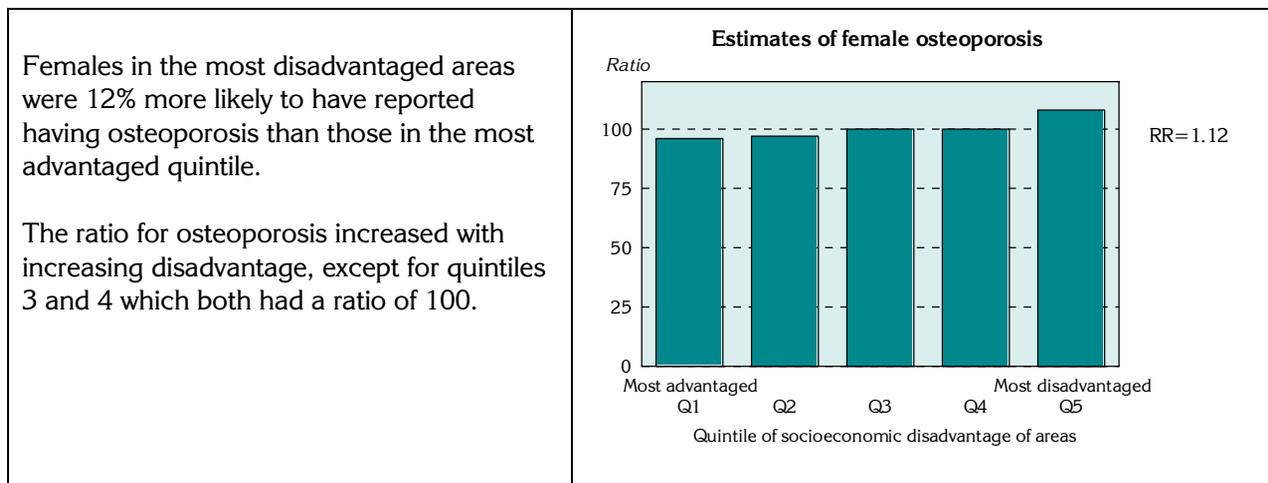
**Osteoporosis is characterised by bones becoming fragile and breaking easily due to a loss of calcium. This is particularly evident in women as they age after menopause, when the protective effects of the hormone, oestrogen, diminish. Other preventable risk factors include poor diet; physical inactivity; tobacco use and alcohol misuse. Use of medications, appropriate exercise regimes and nutrition can help to reduce the impact of osteoporosis <sup>70</sup>.**

In Central Northern, it was estimated that 13,271 females had osteoporosis, a standardised ratio (SR) of 101 (Table 46). Elevated standardised ratios (SRs) were concentrated in the outer northern SLAs, with fewer than expected females with osteoporosis throughout the eastern SLAs (Map 45), generally following the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

Salisbury Balance had over one third more females with osteoporosis than expected from the State rates, an SR of 136\* (65 females). Playford - West Central (an SR of 122\*\*, 170 females) and Salisbury - Inner North (121\*\*, 271) also had highly elevated ratios, all with over 20% more females than expected. All of the Playford SLAs had elevated ratios, these were - Elizabeth (110\*, 520), - East Central (109, 202), - Hills (106, 36) and - West (105, 107).

It was estimated that there are large numbers of females with osteoporosis living in West Torrens - West (645 females, an SR of 101), Port Adelaide Enfield - East (524, 102) and - Port (517, 102), Salisbury - South-East (508, 100), Charles Sturt - Inner West (494, 96) and - Inner East (447, 100), West Torrens - East (438, 101), Port Adelaide Enfield - Inner (432, 103) and Campbelltown - West (412, 97).

SLAs with fewer females with osteoporosis than expected from the metropolitan rates included Burnside - North-East (an SR of 92, 420 females), Tea Tree Gully - Hills (93, 173), Adelaide Hills - Central (93, 182), Charles Sturt - Coastal (93, 618), Burnside - South-West (94, 446), Campbelltown - East (95, 433), Tea Tree Gully - South (95, 557) and - Central (95, 346) and Walkerville (95, 158).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 45: Estimated prevalence of female osteoporosis, CNAHS, 2001

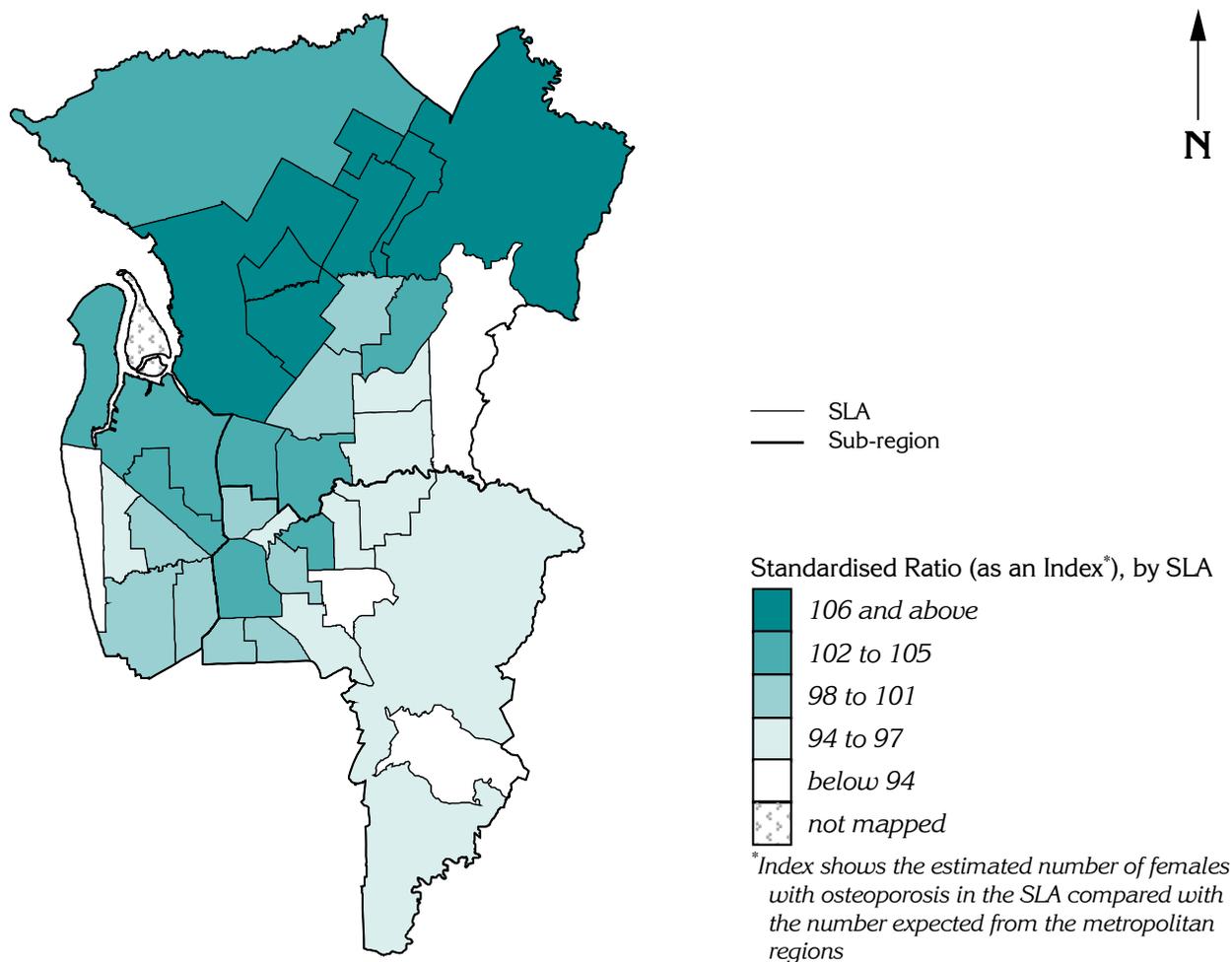


Table 46: Estimated prevalence of female osteoporosis, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	2,574	34.0	96
Quintile 2	2,279	34.4	97
Quintile 3	3,165	35.5	100
Quintile 4	2,391	35.3	100
Quintile 5: most disadvantaged areas	2,862	38.3	108**
<b>Rate ratio</b>	..	<b>1.12</b>	<b>1.12**</b>
<b>Northern</b>	<b>4,925</b>	<b>36.7</b>	<b>104**</b>
<b>Western</b>	<b>4,162</b>	<b>35.3</b>	<b>100</b>
<b>Central East</b>	<b>4,184</b>	<b>34.5</b>	<b>97</b>
<b>CNAHS</b>	<b>13,271</b>	<b>35.5</b>	<b>101</b>
<b>Southern</b>	<b>5,748</b>	<b>35.0</b>	<b>99</b>
<b>Metropolitan regions</b>	<b>19,019</b>	<b>35.4</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated disease prevalence: Injury

Estimated number of people who reported in the 2001 NHS having been had an injury in the two weeks prior to being interviewed

## Overview

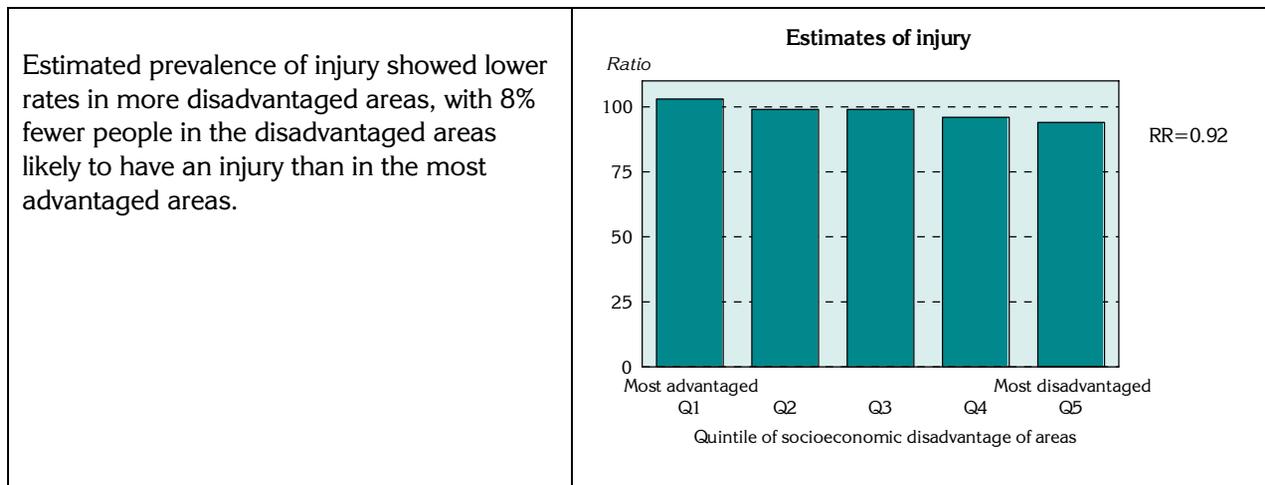
**Injury contributes significantly to mortality and morbidity in Australia. It is the leading cause of death among young people. Injury is also the cause of a range of disabling conditions, often persisting, that affect the quality of life of injured people and their families <sup>71</sup>. Injuries cost the health system an estimated \$4.0 billion annually (8.0% of health expenditure) <sup>71</sup>**

There were an estimated 87,097 injuries in Central Northern over a four week period (an SR of 98<sup>\*\*</sup>) (Table 47). The lowest standardised ratios (SRs) were estimated for the SLA of Adelaide and the surrounding inner western SLAs, with elevated SRs generally in outer areas, in the north-east and south-east, as well as in the beachside suburbs to the west of the city (Map 46).

SLAs in the region had only marginally above-average ratios, the highest of which was estimated for Playford - Hills (an SR of 109<sup>\*</sup>, 381 people). The other SLAs with above-average numbers of injuries included Adelaide Hills - Central (an SR of 109<sup>\*\*</sup>, 1,611 injuries), Port Adelaide Enfield - Coast (107<sup>\*\*</sup>, 3,395), Burnside - South-West (105<sup>\*\*</sup>, 2,360), Tea Tree Gully - Hills (105, 1,526), Walkerville (105, 769), Playford - East Central (104<sup>\*</sup>, 2,620), Charles Sturt - Coastal (104<sup>\*</sup>, 3,486), Adelaide Hills - Ranges (104, 1,237), Tea Tree Gully - Central (104<sup>\*\*</sup>, 3,361) and - North (103, 3,453), Burnside - North-East (103, 2,326) and Playford - Elizabeth (103<sup>\*\*</sup>, 3,158).

There were relatively large numbers of injuries in the SLAs of Salisbury - South-East (3,949 injuries, an SR of 99), - Inner North (3,223, 97) and - North-East (2,781, 100) and West Torrens - West (2,969, 98).

The SLAs with the lowest numbers of injuries included Port Adelaide Enfield - Port (an SR of 87<sup>\*\*</sup>, 2,528 injuries), Adelaide (89<sup>\*\*</sup>, 1,724), Charles Sturt - North East (90<sup>\*\*</sup>, 2,668), - Inner West (91<sup>\*\*</sup>, 2,469) and - Inner East (93<sup>\*\*</sup>, 2,244), West Torrens - East (91<sup>\*\*</sup>, 2,496), Salisbury Balance (92<sup>\*</sup>, 731), Campbelltown - East (92<sup>\*\*</sup>, 2,912) and - West (93<sup>\*\*</sup>, 1,952), Port Adelaide Enfield - Inner (92<sup>\*\*</sup>, 2,066), Playford - West (94, 968), Salisbury - Central (94<sup>\*\*</sup>, 3,240) and Port Adelaide Enfield - East (94<sup>\*\*</sup>, 3,017).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 46: Estimated prevalence of injury, CNAHS, 2001

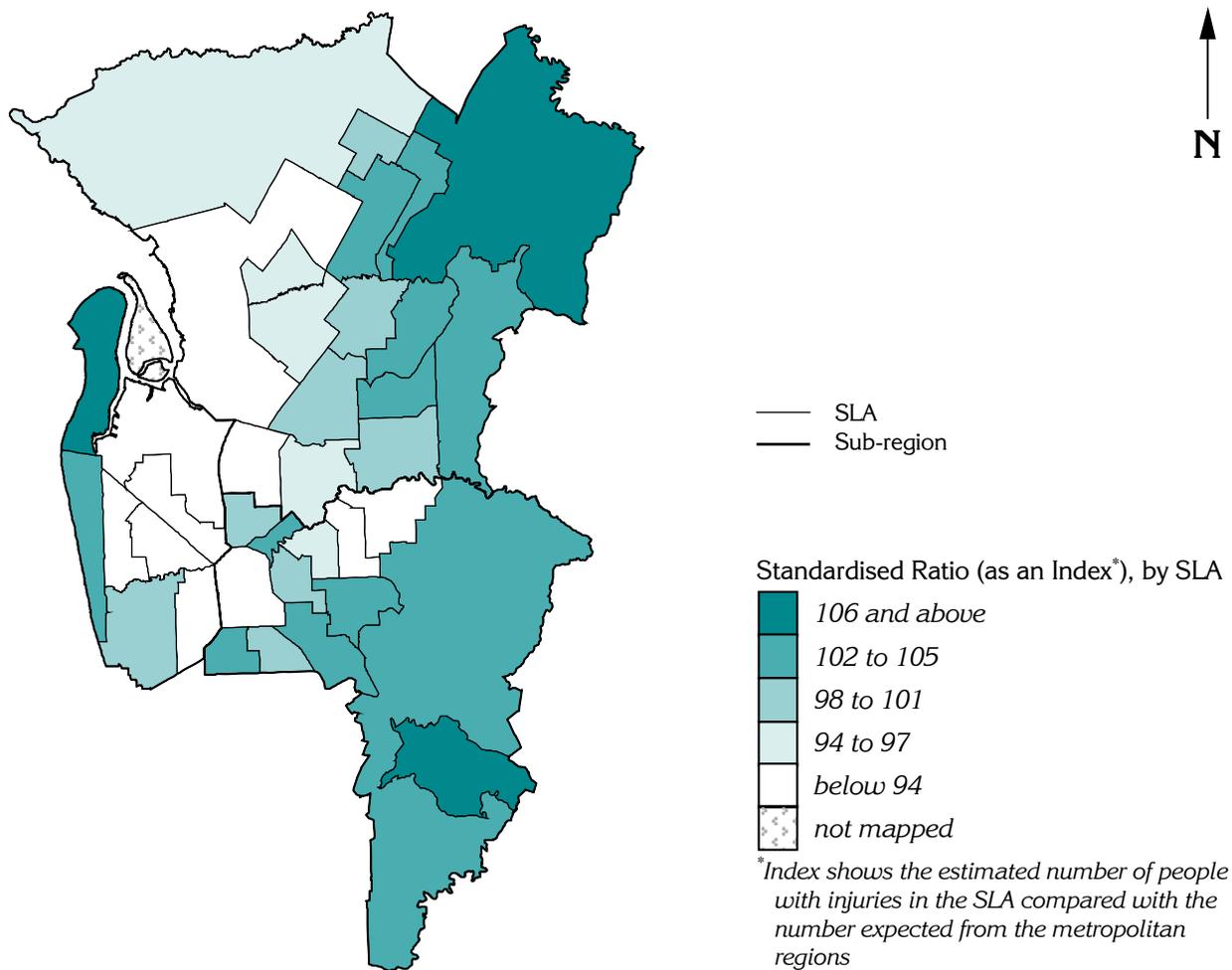


Table 47: Estimated prevalence of injury, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	16,320	124.0	103**
Quintile 2	17,124	119.1	99
Quintile 3	18,943	119.2	99
Quintile 4	15,429	115.0	96**
Quintile 5: most disadvantaged areas	19,281	113.4	94**
<b>Rate ratio</b>	..	<b>0.92</b>	<b>0.92**</b>
<b>Northern</b>	<b>40,010</b>	<b>119.4</b>	<b>99</b>
<b>Western</b>	<b>22,255</b>	<b>114.6</b>	<b>95**</b>
<b>Central East</b>	<b>24,832</b>	<b>118.7</b>	<b>99</b>
<b>CNAHS</b>	<b>87,097</b>	<b>117.9</b>	<b>98**</b>
<b>Southern</b>	<b>38,830</b>	<b>125.3</b>	<b>104**</b>
<b>Metropolitan regions</b>	<b>125,926</b>	<b>120.1</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

## Estimated self-reported health prevalence: Very high psychological distress (K-10)

Estimated number of people aged 18 years and over who had very high levels of psychological stress: data from the 2001 NHS

### Overview

*In addition to the self-reported responses to questions on mental health, shown above (page 136), information was collected using the Kessler Psychological Distress Scale (K-10). This is a scale of non-specific psychological distress, based on 10 questions about negative emotional states in the four weeks prior to interview, and asked of respondents 18 years and over* <sup>63</sup>

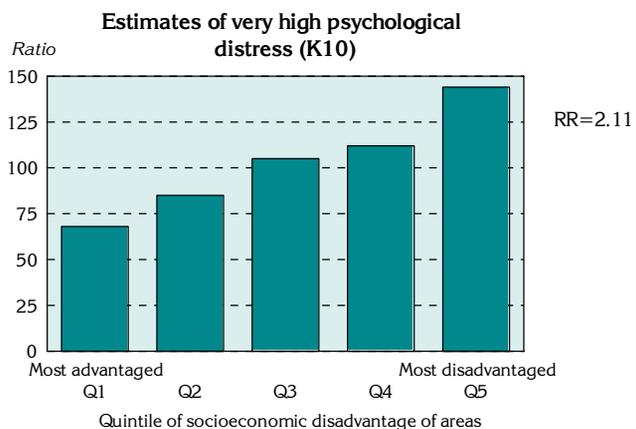
Overall, Central Northern had four per cent more people with very high levels of psychological distress than expected from the State rates (a standardised ratio (SR) of 104<sup>\*\*</sup>, 23,453 people) (Table 48). The SLAs with elevated ratios (Map 47) follow the pattern of socioeconomic disadvantage shown in Map 23 (page 113), with elevated ratios in the west, north-west and outer north, and low ratios to the east, south-east and north-east of the city.

Highly elevated ratios were recorded for people in Port Adelaide Enfield - Port (an SR of 161<sup>\*\*</sup>, 1,218 people), Playford - Elizabeth (158<sup>\*\*</sup>, 1,126) and - West Central (155<sup>\*\*</sup>, 515), Salisbury - Inner North (142<sup>\*\*</sup>, 944), Charles Sturt - North East (135<sup>\*\*</sup>, 1,026), Salisbury - Central (134<sup>\*\*</sup>, 1,049), Port Adelaide Enfield - Inner (134<sup>\*\*</sup>, 773), Salisbury Balance (124<sup>\*\*</sup>, 202) and West Torrens - East (121<sup>\*\*</sup>, 873).

Relatively large numbers of people with very high levels of psychological distress were estimated for the populations of Salisbury - South-East (1,123 people, an SR of 112<sup>\*\*</sup>), Port Adelaide Enfield - Coast (964, 111<sup>\*\*</sup>) and - East (955, 113<sup>\*\*</sup>), West Torrens - West (899, 106), Tea Tree Gully - South (880, 88<sup>\*\*</sup>), Charles Sturt - Inner West (851, 114<sup>\*\*</sup>) and - Coastal (808, 83<sup>\*\*</sup>).

Very low ratios were recorded for Adelaide Hills - Ranges (an SR of 55<sup>\*\*</sup>, 173 people), - Central (57<sup>\*\*</sup>, 222), Burnside - South-West (61<sup>\*\*</sup>, 390), - North-East (63<sup>\*\*</sup>, 402), Walkerville (64<sup>\*\*</sup>, 135), Tea Tree Gully - Hills (68<sup>\*\*</sup>, 264), Unley - East (75<sup>\*\*</sup>, 428) and - West (79<sup>\*\*</sup>, 397) and Tea Tree Gully - North (79<sup>\*\*</sup>, 594).

There was a distinct socioeconomic pattern associated with very high psychological distress levels, with increasing ratios with increasing disadvantage. Those in the most disadvantaged quintile were more than twice as likely to have very high psychological distress levels as those in the most advantaged quintile.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 47: Estimates of very high psychological distress (K-10), people aged 18 years and over, CNAHS, 2001

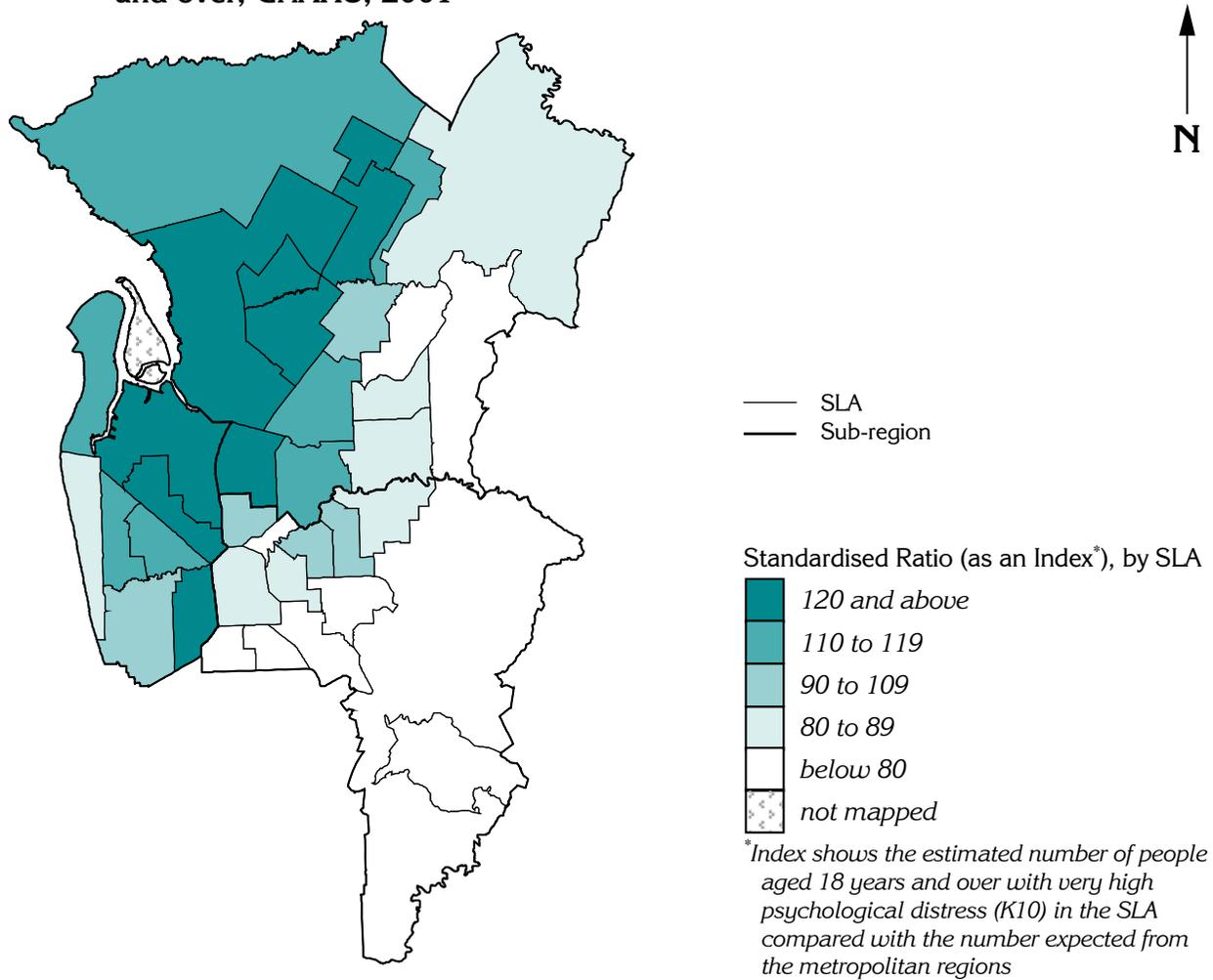


Table 48: Estimates of very high psychological distress (K-10), people aged 18 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	2,915	27.3	68**
Quintile 2	3,777	33.7	85**
Quintile 3	5,248	42.0	105**
Quintile 4	4,658	44.8	112**
Quintile 5: most disadvantaged areas	6,855	57.6	144**
<b>Rate ratio</b>	..	<b>2.11</b>	<b>2.11**</b>
<b>Northern</b>	<b>10,664</b>	<b>44.7</b>	<b>112**</b>
<b>Western</b>	<b>7,407</b>	<b>46.8</b>	<b>117**</b>
<b>Central East</b>	<b>5,382</b>	<b>31.7</b>	<b>77**</b>
<b>CNAHS</b>	<b>23,453</b>	<b>41.4</b>	<b>104**</b>
<b>Southern</b>	<b>8,759</b>	<b>36.4</b>	<b>91**</b>
<b>Metropolitan regions</b>	<b>32,212</b>	<b>39.9</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated self-reported health prevalence: Fair or poor health

Estimated number of people aged 15 years and over who reported their health in the 2001 NHS as having 'fair' or 'poor' health

## Overview

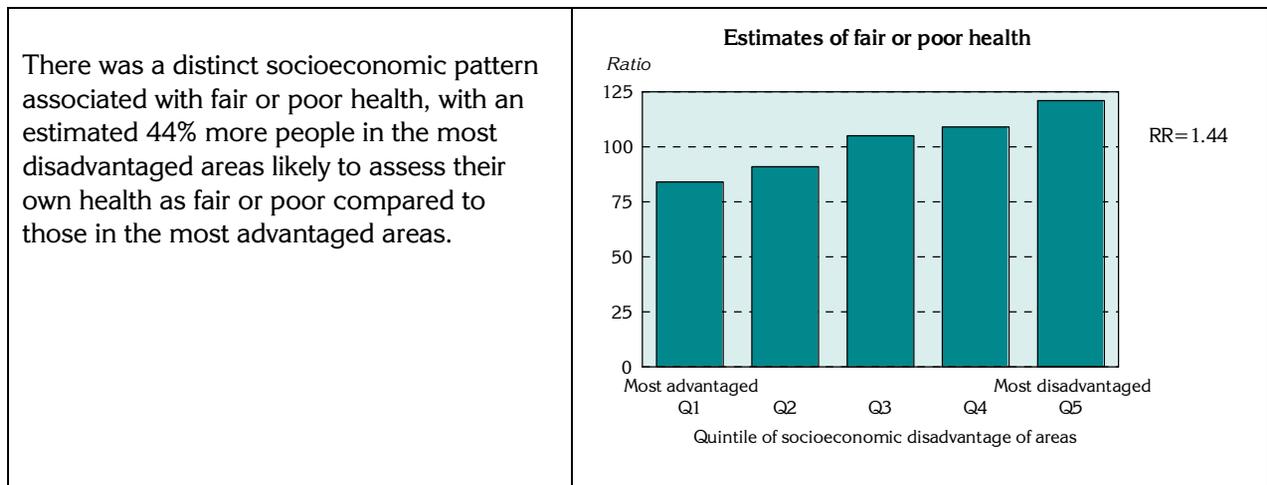
**Self-assessed health status refers to a person's perception of their general state of health. Respondents aged 15 years and over in the 2001 NHS were asked to rate their health on a scale from 'excellent', through 'very good', 'good' and 'fair', to 'poor' health<sup>63</sup>. The data shown here relate to the 20% of the population who reported their health as 'fair' or 'poor'.**

In the Central Northern region, an estimated 127,996 people rated their health as fair or poor (two per cent more than expected, a standardised ratio (SR) of 102\*\*) (Table 49). SLAs with highly elevated ratios were largely located in the north-west and outer north, with low ratios to the east, south-east and north-east of the city (Map 48), following the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

A number of SLAs in this region had elevated or highly elevated ratios, including Salisbury - Inner North (an SR of 125\*\*, 3,978 people), Port Adelaide Enfield - Port (124\*\*, 5,368), Playford - Elizabeth (124\*\*, 5,192), - West Central (123\*\*, 2,114) and - West (117\*\*, 1,444), Charles Sturt - North East (118\*\*, 4,980), Salisbury - Central (117\*\*, 4,821) and Balance (116\*\*, 884), Port Adelaide Enfield - Inner (116\*\*, 3,961), West Torrens - East (112\*\*, 4,559), Charles Sturt - Inner East (112\*\*, 4,275) and - Inner West (110\*\*, 4,853), and Playford - East Central (111\*\*, 2,729).

Large numbers of people rating their health as fair or poor were residents in Salisbury - South-East (5,754 people, an SR of 107\*\*), West Torrens - West (5,438, 106\*\*), Port Adelaide Enfield - East (5,243, 109\*\*) and - Coast (5,214, 109\*\*), Tea Tree Gully - South (5,090, 91\*\*) and Charles Sturt - Coastal (5,082, 89\*\*).

SLAs with fewer than expected people reporting their health as fair or poor included Adelaide Hills - Ranges (an SR of 75\*\*, 1,214) and - Central (77\*\*, 1,575), Burnside - South-West (80\*\*, 3,042) and - North-East (82\*\*, 3,060), Tea Tree Gully - Hills (82\*\*, 1,690), Walkerville (84\*\*, 1,091) and Playford - Hills (85\*\*, 361).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 48: Estimates of fair or poor health, people aged 15 years and over, CNAHS, 2001

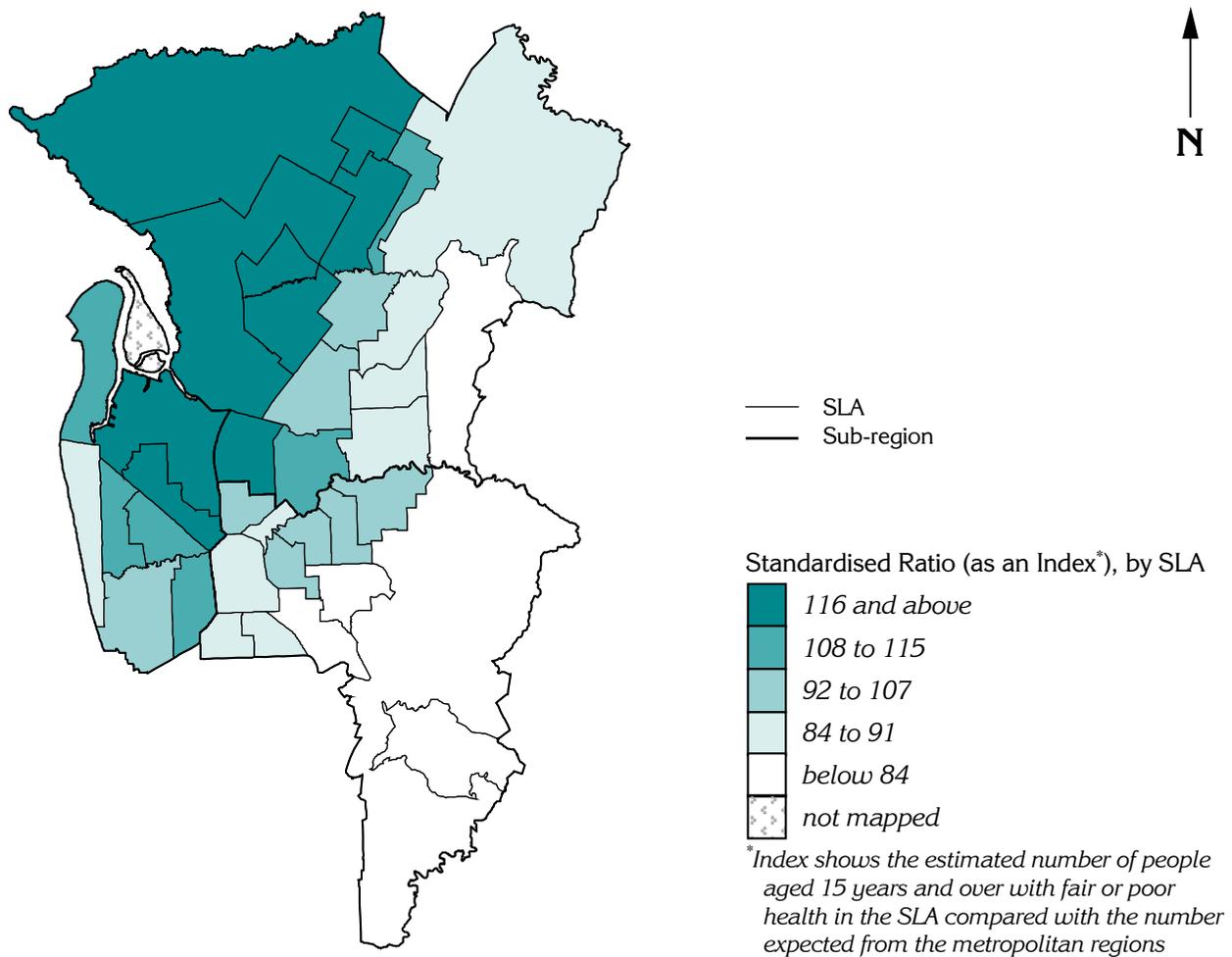


Table 49: Estimates of fair or poor health, people aged 15 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	20,132	176.2	84**
Quintile 2	21,716	190.3	91**
Quintile 3	29,666	219.9	105**
Quintile 4	25,183	229.4	109**
Quintile 5: most disadvantaged areas	31,299	253.6	121**
<b>Rate ratio</b>	..	<b>1.44</b>	<b>1.44**</b>
<b>Northern</b>	<b>53,602</b>	<b>223.5</b>	<b>106**</b>
<b>Western</b>	<b>39,770</b>	<b>229.1</b>	<b>109**</b>
<b>Central East</b>	<b>34,624</b>	<b>189.2</b>	<b>89**</b>
<b>CNAHS</b>	<b>127,996</b>	<b>214.6</b>	<b>102**</b>
<b>Southern</b>	<b>50,833</b>	<b>199.8</b>	<b>95**</b>
<b>Metropolitan regions</b>	<b>178,829</b>	<b>210.2</b>	<b>100</b>

\* Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated risk factor prevalence: Overweight (not obese) males

Estimated number of males aged 15 years and over who were assessed as being overweight, based on reports of their height and weight in the 2001 NHS

## Overview

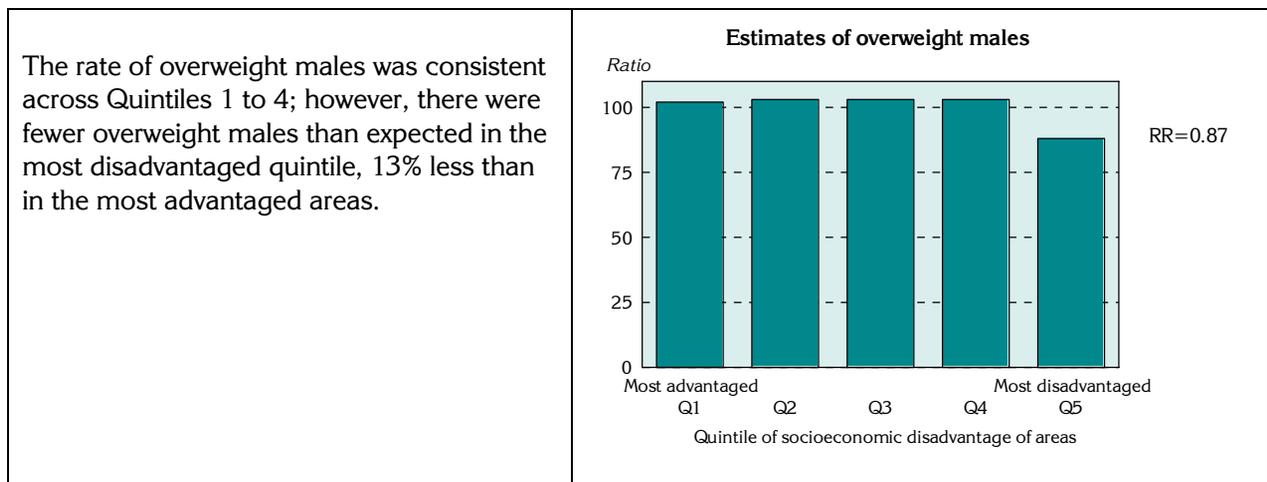
*Each increment in a person’s body weight above their optimal level is associated with an increase in the risk of ill health. Overweight arises through an energy imbalance over a sustained period of time. While many factors may influence a person’s weight, weight gain is essentially due to the energy intake from the diet being greater than the energy expended through physical activity. The energy imbalance need only be minor for weight gain to occur, and some people, due to genetic and biological factors, may be more likely to gain weight than others <sup>72</sup>. Overweight is associated with higher mortality and morbidity, and those who are already overweight have a higher risk of becoming obese.*

It was estimated that there were 106,514 overweight (not obese) males (an SR of 100) in the region in 2001 (Table 50). The highest standardised ratios (SRs) were estimated for SLAs in the north-east and outer north-east of the Central Northern region (Map 49).

SLAs with more overweight males than expected were Tea Tree Gully - North (an SR of 108\*\*, 3,472 males), Playford - East Central (107\*\*, 2,501) and - Hills (107, 424), Campbelltown - East (106\*\*, 4,085), Tea Tree Gully - Central (105\*\*, 3,861), Charles Sturt - Inner West (105\*\*, 3,730), Adelaide Hills - Ranges (105, 1,534) and - Central (105\*\*, 1,827) and Salisbury - North-East (105\*\*, 3,252).

Large numbers of overweight males aged 15 years and over were usual residents in the SLAs of Tea Tree Gully - South (4,872 males, 103\*), Salisbury - South-East (4,866, 103), Charles Sturt - Coastal (4,717, 101), West Torrens - West (4,222, 103\*), Port Adelaide Enfield - East (4,125, 100) and - Coast (4,087, 101).

SLAs with low ratios, having fewer overweight males than expected, included Port Adelaide Enfield - Port (an SR of 82\*\*, 2,985 males) and - Inner (87\*\*, 2,427), Playford - Elizabeth (84\*\*, 2,846) and - West Central (87\*\*, 1,400), Salisbury - Central (90\*\*, 3,329) and - Inner North (91\*\*, 2,795), Charles Sturt - North-East (94\*\*, 3,402) and Adelaide (94\*\*, 2,903).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 49: Estimates of overweight (not obese) males aged 15 years and over, CNAHS, 2001

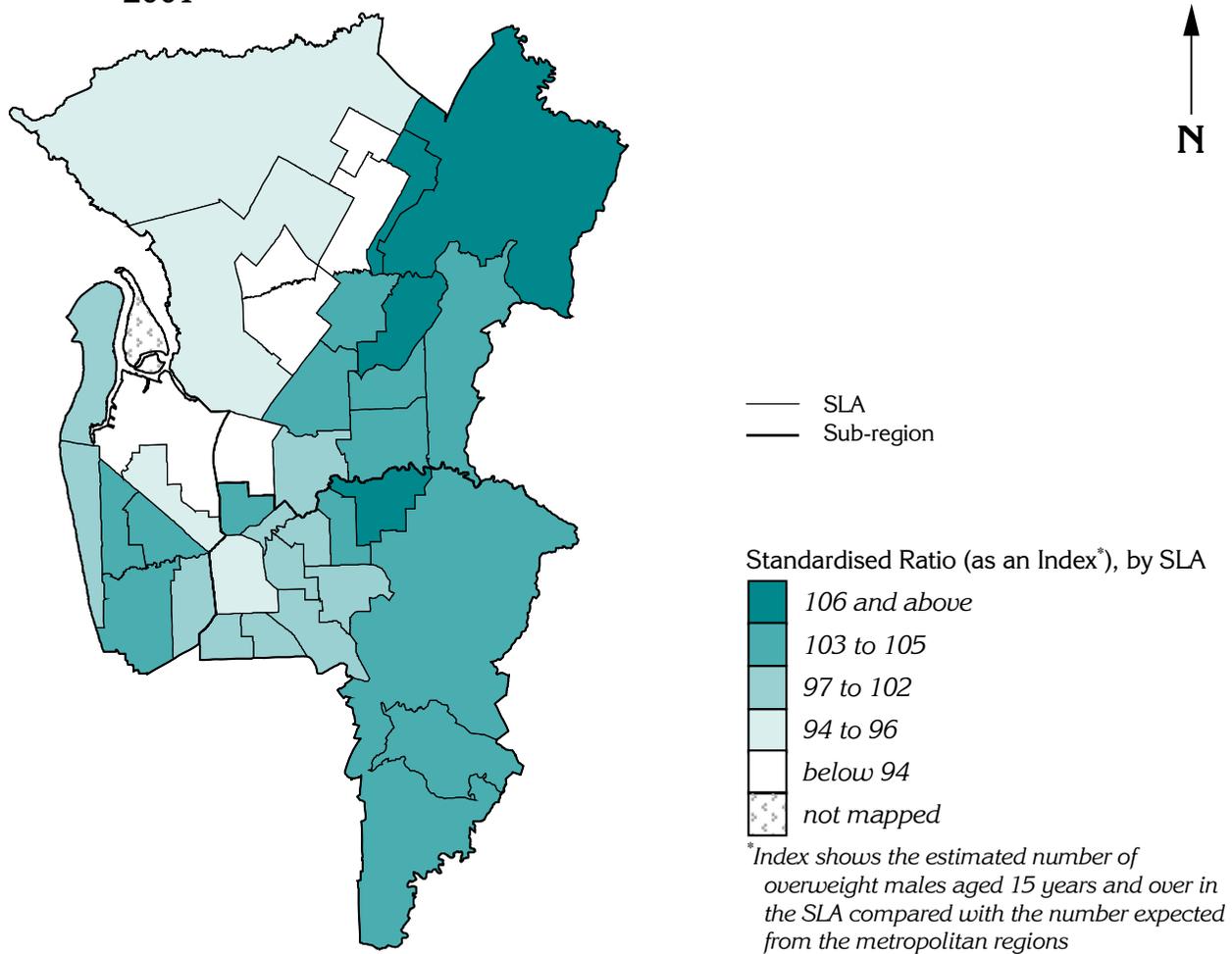


Table 50: Estimates of overweight (not obese) males aged 15 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	20,166	377.6	102**
Quintile 2	21,772	381.1	103**
Quintile 3	24,301	380.1	103**
Quintile 4	20,340	379.8	103**
Quintile 5: most disadvantaged areas	19,934	326.7	88**
<b>Rate ratio</b>	..	<b>0.87</b>	<b>0.87**</b>
<b>Northern</b>	<b>43,959</b>	<b>364.7</b>	<b>98**</b>
<b>Western</b>	<b>29,991</b>	<b>365.9</b>	<b>99*</b>
<b>Central East</b>	<b>32,564</b>	<b>376.1</b>	<b>102**</b>
<b>CNAHS</b>	<b>106,514</b>	<b>368.5</b>	<b>100</b>
<b>Southern</b>	<b>45,016</b>	<b>374.7</b>	<b>101*</b>
<b>Metropolitan regions</b>	<b>151,530</b>	<b>370.3</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

## Estimated risk factor prevalence: Obese males

Estimated number of males aged 15 years and over who were assessed as being obese, based on reports of their height and weight in the 2001 NHS

### Overview

**Over consumption, or the consumption of more calories than are required to meet energy needs, is contributing to Australia's increase in obesity which in turn is a significant contributing factor in the development of many diseases<sup>63</sup>. Obesity can in itself lead to high blood pressure and high blood cholesterol. Excess body weight, high blood pressure and high blood cholesterol can all contribute to the risk of heart disease and amplify each risk factor's effects if they occur together. Excess body fat also increases the risk of developing a range of health problems including type 2 diabetes, cardiovascular disease, high blood pressure, certain cancers, sleep apnoea, osteoarthritis, psychological disorders and social problems<sup>72</sup>.**

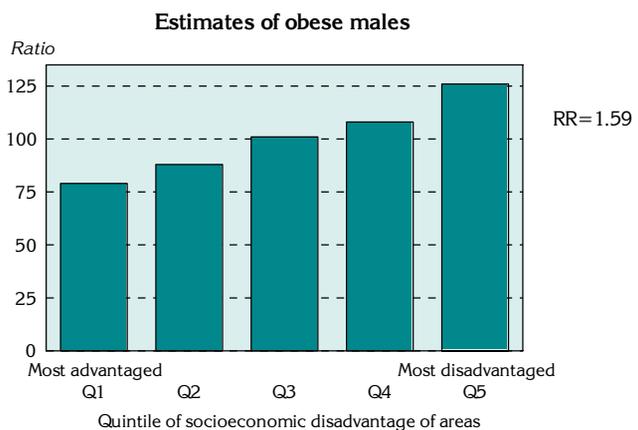
In 2001, it was estimated that there were 38,673 obese males in the region, one per cent more than expected (a standardised ratio (SR) of 101<sup>\*</sup>) (Table 52): however, there were notable variations in ratios across the region. Elevated SRs were mapped in the north and north-west with low SRs in the east and south-east (Map 51), generally following the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

Playford - Elizabeth had over one third more obese males than expected (an SR of 139<sup>\*\*</sup>, 1,642 males). The Salisbury SLAs of - Inner North (with an SR of 137<sup>\*\*</sup>, 1,595 males), - Central (133<sup>\*\*</sup>, 1,786) and Balance (127<sup>\*\*</sup>, 373) all had highly elevated SRs; similarly, Port Adelaide Enfield - Inner (127<sup>\*\*</sup>, 1,237) and - Port (119<sup>\*\*</sup>, 1,532). Playford - West (124<sup>\*\*</sup>, 514), - West Central (123<sup>\*\*</sup>, 720) and - East Central (111<sup>\*\*</sup>, 971) and Charles Sturt - Inner West (111<sup>\*\*</sup>, 1,366) also had elevated ratios.

Large numbers of obese males were estimated for the SLAs of Salisbury - South-East (1,825 males, an SR of 106<sup>\*</sup>), Port Adelaide Enfield - Coast (1,566, 107<sup>\*\*</sup>) and - East (1,510, 103), Tea Tree Gully - South (1,563, 93<sup>\*\*</sup>), West Torrens - West (1,472, 105) and Charles Sturt - North East (1,336, 103).

The lowest ratios, with fewer obese males than expected were estimated for Adelaide (an SR of 72<sup>\*\*</sup>, 809 males), Burnside - South-West (75<sup>\*\*</sup>, 771) and - North-East (76<sup>\*\*</sup>, 765), Norwood Payneham and St Peters - West (77<sup>\*\*</sup>, 683), Unley - East (78<sup>\*\*</sup>, 730) and - West (79<sup>\*\*</sup>, 661), Adelaide Hills - Central (81<sup>\*\*</sup>, 514) and - Ranges (82<sup>\*\*</sup>, 445), Walkerville (81<sup>\*\*</sup>, 278), Prospect (85<sup>\*\*</sup>, 821) and Charles Sturt - Coastal (89<sup>\*\*</sup>, 1,452).

There was a distinct socioeconomic pattern associated with the distribution of obese males, with 58% more obese males in the most disadvantaged areas than in the most advantaged quintile.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 50: Estimates of obese males aged 15 years and over, CNAHS, 2001

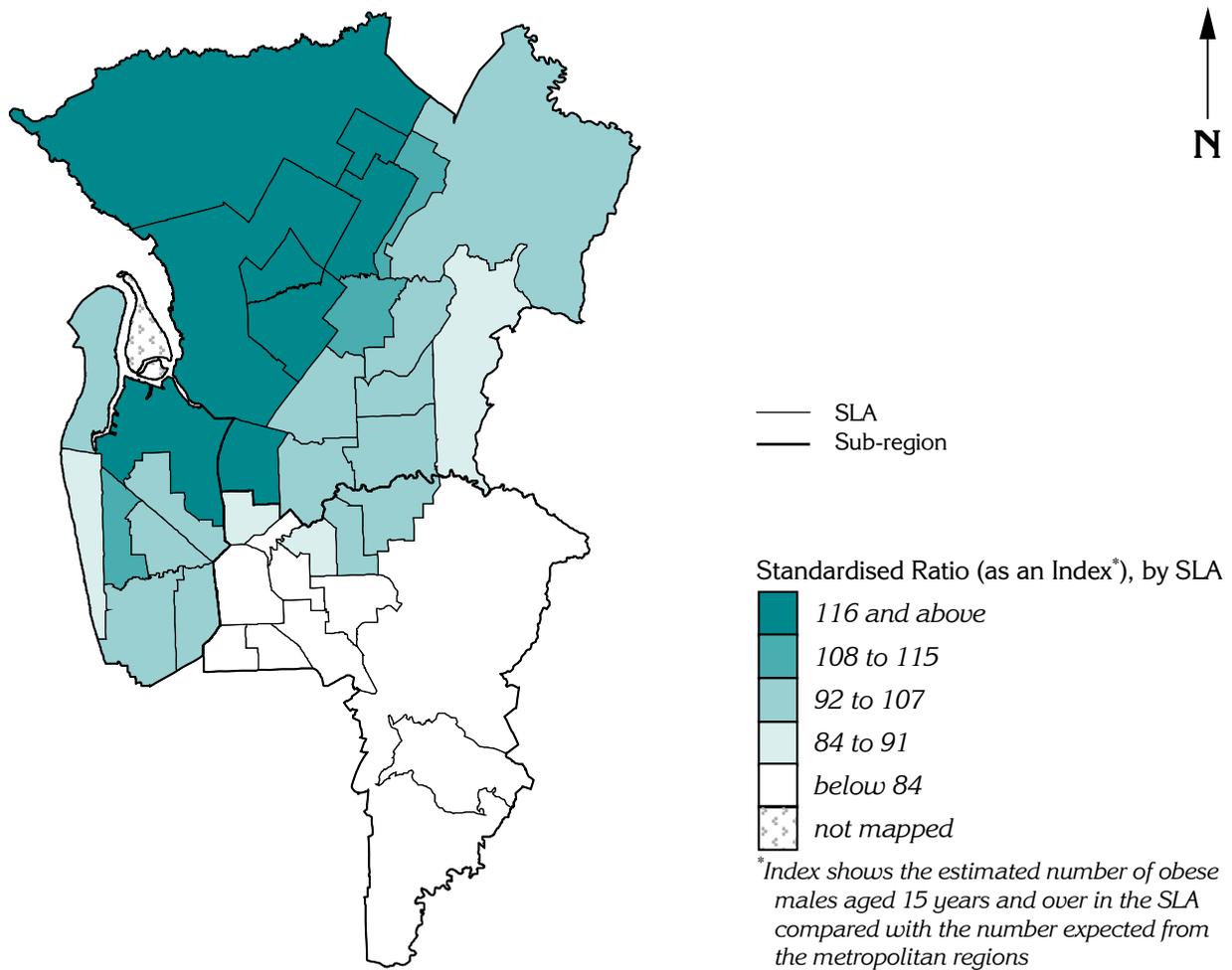


Table 51: Estimates of obese males aged 15 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	5,605	105.1	79**
Quintile 2	6,750	116.8	88**
Quintile 3	8,456	133.9	101
Quintile 4	7,641	142.9	108**
Quintile 5: most disadvantaged areas	10,221	166.7	126**
<b>Rate ratio</b>	..	<b>1.59</b>	<b>1.59**</b>
<b>Northern</b>	<b>18,138</b>	<b>147.9</b>	<b>112**</b>
<b>Western</b>	<b>11,155</b>	<b>138.3</b>	<b>104**</b>
<b>Central East</b>	<b>9,380</b>	<b>109.3</b>	<b>83**</b>
<b>CNAHS</b>	<b>38,673</b>	<b>133.8</b>	<b>101*</b>
<b>Southern</b>	<b>15,498</b>	<b>129.0</b>	<b>97**</b>
<b>Metropolitan regions</b>	<b>54,171</b>	<b>132.4</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated risk factor prevalence: Overweight (not obese) females

Estimated number of females aged 15 years and over who were assessed as being overweight, based on reports of their height and weight in the 2001 NHS

## Overview

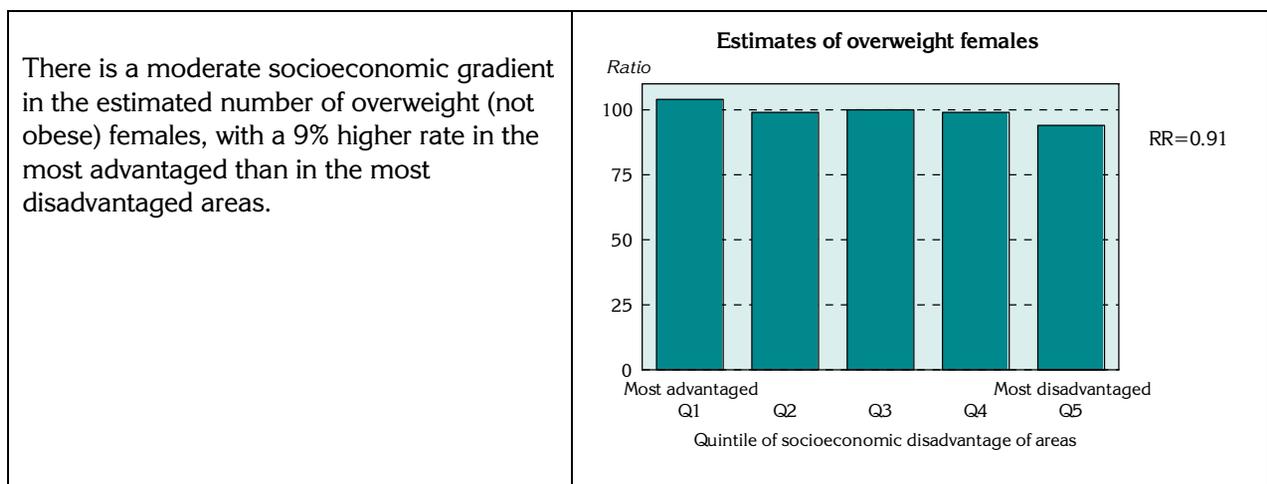
*Each increment in a person’s body weight above their optimal level is associated with an increase in the risk of ill health. Overweight arises through an energy imbalance over a sustained period of time. While many factors may influence a person’s weight, weight gain is essentially due to the energy intake from the diet being greater than the energy expended through physical activity. The energy imbalance need only be minor for weight gain to occur, and some people, due to genetic and biological factors, may be more likely to gain weight than others <sup>72</sup>. Overweight is associated with higher mortality and morbidity, and those who are already overweight have a higher risk of becoming obese.*

In 2001, there were an estimated 63,362 overweight (not obese) females in the region, one percent fewer than expected (a standardised ratio (SR) of 99\*\*) (Table 51). SLAs with elevated ratios were located in the north-east and south-east of the region (Map 50).

None of the SLAs had highly elevated ratios: those with ratios above 100 included Adelaide Hills - Central (an SR of 108\*\*, 1,101 females) and - Ranges (107\*, 839), Burnside - South-West (107\*\*, 2,042), Playford - Hills (105, 219), Burnside - North-East (105\*, 1,987), Walkerville (104, 683), Unley - West (104, 1,505), Tea Tree Gully - Hills (103, 1,039) and West Torrens - West (103, 2,669).

Large numbers of overweight females were estimated for the SLAs of Charles Sturt - Coastal (2,846 females, an SR of 101), Tea Tree Gully - South (2,801, 100), Salisbury - South-East (2,751, 100), Port Adelaide Enfield - Coast (2,415, 101) and - East (2,373, 97) and Campbelltown - East (2,250, 97).

The lowest ratios, with fewer overweight females than expected, were estimated for Port Adelaide Enfield - Port (an SR of 89\*\*, 1,940 females), Salisbury Balance (91, 346), Adelaide (92\*\*, 1,238), Playford - West Central (92\*, 815), Salisbury - Inner North (94\*, 1,587), Port Adelaide Enfield - Inner (94\*, 1,623) and Playford - Elizabeth (95\*, 2,050)



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 51: Estimates of overweight (not obese) females aged 15 years and over, CNAHS, 2001

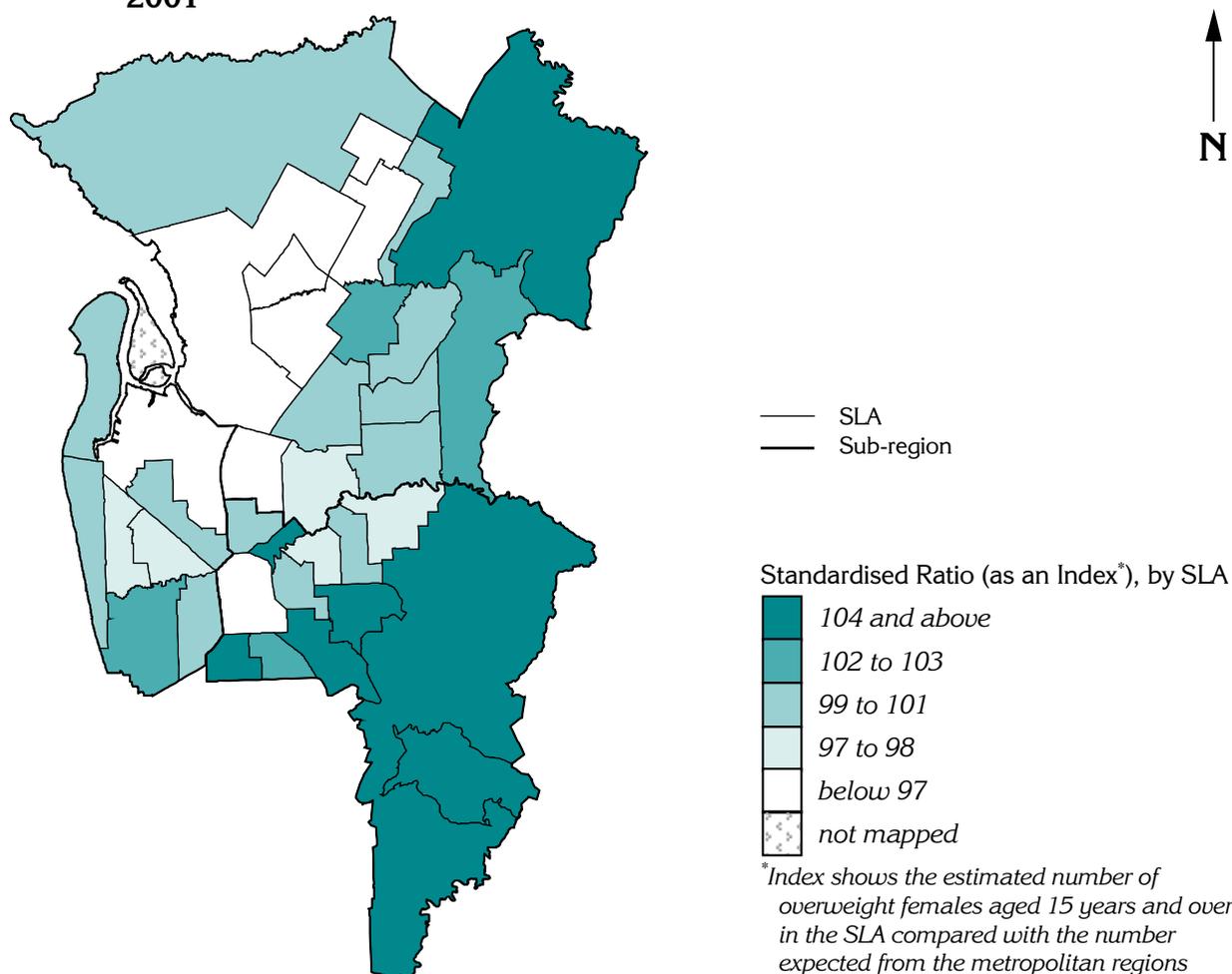


Table 52: Estimates of overweight (not obese) females aged 15 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	12,759	214.3	104**
Quintile 2	11,993	203.8	99
Quintile 3	14,523	206.4	100
Quintile 4	11,566	203.3	99
Quintile 5: most disadvantaged areas	12,520	194.2	94**
<b>Rate ratio</b>	<b>..</b>	<b>0.91</b>	<b>0.91**</b>
<b>Northern</b>	<b>25,415</b>	<b>202.3</b>	<b>98**</b>
<b>Western</b>	<b>18,104</b>	<b>202.7</b>	<b>98*</b>
<b>Central East</b>	<b>19,843</b>	<b>208.5</b>	<b>102*</b>
<b>CNAHS</b>	<b>63,362</b>	<b>204.3</b>	<b>99*</b>
<b>Southern</b>	<b>27,650</b>	<b>210.2</b>	<b>102**</b>
<b>Metropolitan regions</b>	<b>91,012</b>	<b>206.1</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

## Estimated risk factor prevalence: Obese females

*Estimated number of females aged 15 years and over who were assessed as being obese, based on reports of their height and weight in the 2001 NHS*

### Overview

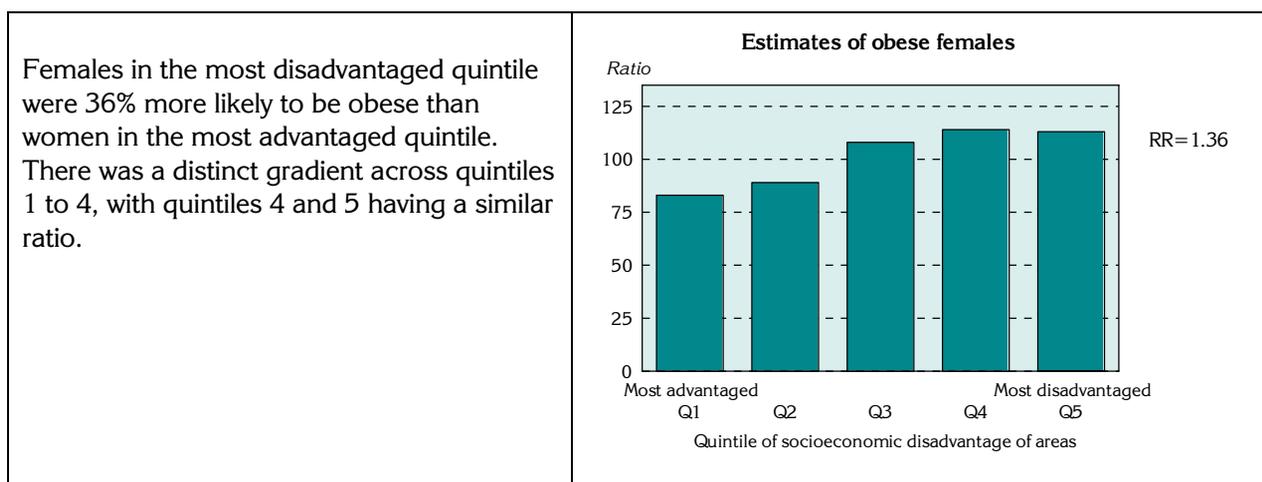
**Over consumption, or the consumption of more calories than are required to meet energy needs, is contributing to Australia's increase in obesity which in turn is a significant contributing factor in the development of many diseases<sup>63</sup>. Obesity can in itself lead to high blood pressure and high blood cholesterol. Excess body weight, high blood pressure and high blood cholesterol can all contribute to the risk of heart disease and amplify each risk factor's effects if they occur together. Excess body fat also increases the risk of developing a range of health problems including type 2 diabetes, cardiovascular disease, high blood pressure, certain cancers, sleep apnoea, osteoarthritis, psychological disorders and social problems<sup>72</sup>.**

In 2001, Central Northern had an estimated 44,104 females considered to be obese, two per cent more than expected from the metropolitan rates (a standardised ratio (SR) of 102\*\*) (Table 53). Elevated ratios were estimated for parts of the north and west, with low ratios in the east (Map 52), generally reflecting the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

The most highly elevated ratios were calculated for Charles Sturt - Inner West (an SR of 122\*\*, 1,782 females), Playford - West Central (119\*\*, 755), Charles Sturt - Inner East (117\*\*, 1,470), Playford - Elizabeth (117\*\*, 1,648), Campbelltown - West (116\*\*, 1,330), Charles Sturt - North-East (114\*\*, 1,659), West Torrens - East (113\*\*, 1,570) and - West (113\*\*, 1,871), Salisbury - Inner North (113\*\*, 1,415), - South-East (112\*\*, 2,162) - North-East (110\*\*, 1,384) and - Central (110\*\*, 1,639), Playford - West (111\*\*, 496), and Port Adelaide Enfield - Inner (111\*\*, 1,221), - East (110\*\*, 1,789) and - Coast (110\*\*, 1,809).

Large numbers of overweight and obese females were estimated for Tea Tree Gully - South (1,816 females, an SR of 95\*), Charles Sturt - Coastal (1,718, 92\*\*), Campbelltown - East (1,560, 96) and Port Adelaide Enfield - Port (1,543, 108\*\*).

A large number of SLAs had low ratios of obese females. Adelaide had the lowest ratio with nearly one quarter fewer obese females than expected (an SR of 75\*\*, 668 females), Adelaide Hills - Ranges (77\*\*, 447) and - Central (80\*\*, 586), Burnside - South-West (80\*\*, 1,002) and - North-East (81\*\*, 1,004), Walkerville (81\*\*, 339), Unley - East (84\*\*, 959) and - West (85\*\*, 838), Tea Tree Gully - North (85\*\*, 1,256) and - Hills (88\*\*, 634), Norwood Payneham and St Peters - West (87\*\*, 902) and Playford - Hills (87, 138).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 52: Estimates of obese females aged 15 years and over, CNAHS, 2001

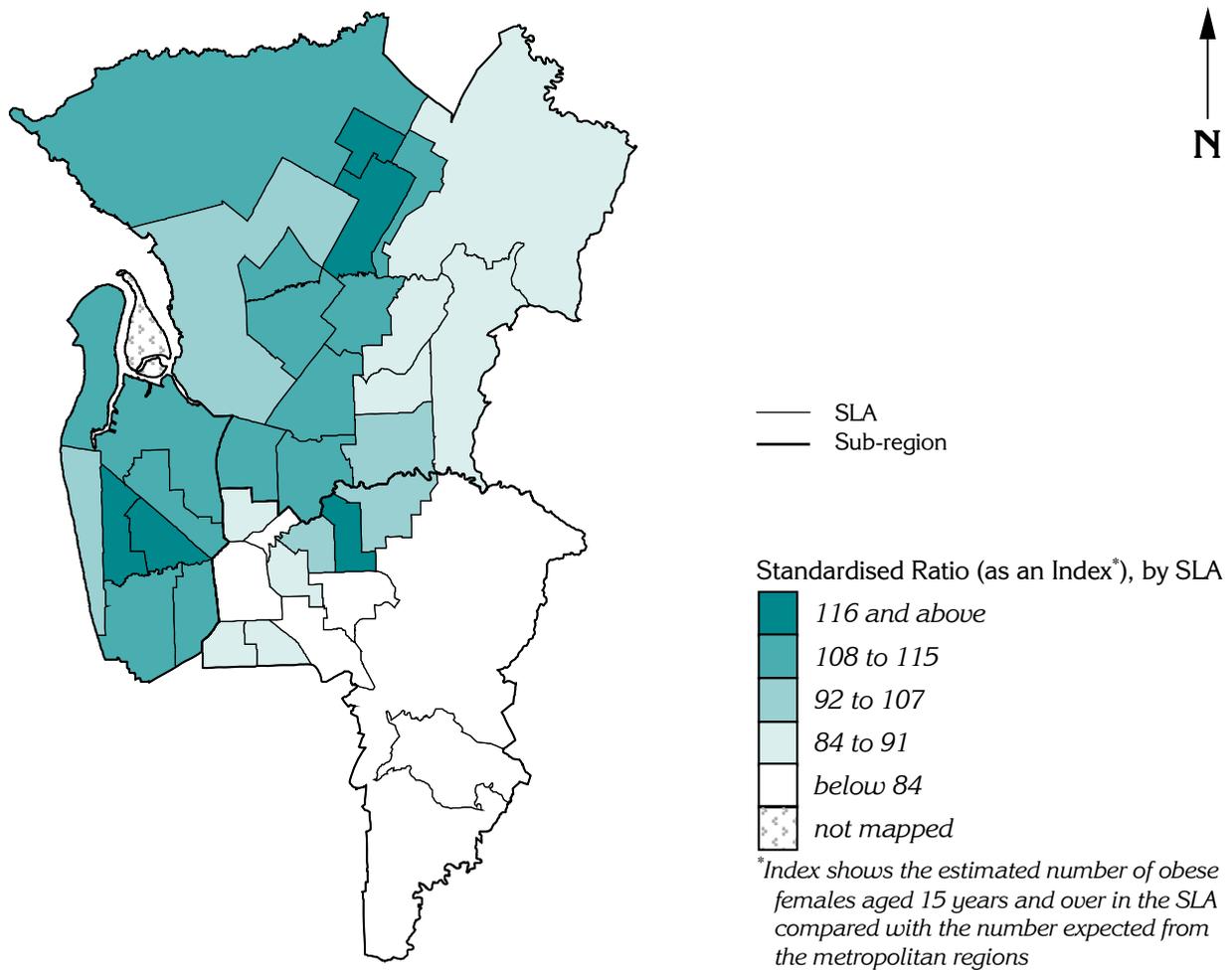


Table 53: Estimates of obese females aged 15 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	6,850	115.9	83**
Quintile 2	7,561	125.3	89**
Quintile 3	10,435	150.8	108**
Quintile 4	9,083	159.5	114**
Quintile 5: most disadvantaged areas	10,176	157.7	113**
<b>Rate ratio</b>	<b>..</b>	<b>1.36</b>	<b>1.36**</b>
<b>Northern</b>	<b>19,081</b>	<b>147.1</b>	<b>105**</b>
<b>Western</b>	<b>13,422</b>	<b>154.7</b>	<b>110**</b>
<b>Central East</b>	<b>11,601</b>	<b>123.9</b>	<b>88**</b>
<b>CNAHS</b>	<b>44,104</b>	<b>142.2</b>	<b>102**</b>
<b>Southern</b>	<b>17,751</b>	<b>134.9</b>	<b>96**</b>
<b>Metropolitan regions</b>	<b>61,855</b>	<b>140.0</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated risk factor prevalence: Current smokers

Estimated number of people aged 18 years and over who reported in the 2001 NHS being a smoker

## Overview

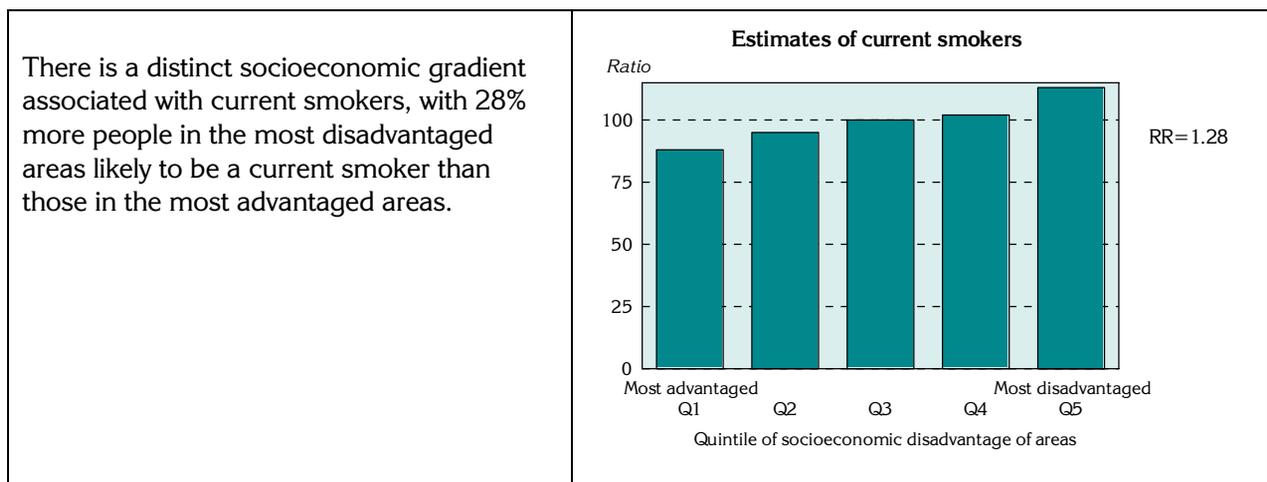
**Tobacco is the largest single cause of death and disease in Australia; and half of all regular smokers who commenced smoking as teenagers will be killed by their habit. Over 20% of adults and 25% of adolescents aged 12 to 17 in Australia in 2004 smoked at least weekly <sup>73</sup>. Smokers who consume more than 40 cigarettes per day have mortality rates between two and three times that of non-smokers; and tobacco smoking has been estimated to cost \$12.7 billion a year in health care, lost productivity and other costs <sup>74</sup>.**

In the Central Northern region, there were an estimated 141,295 current smokers, a standardised ratio (SR) of 100 (Table 54). Elevated SRs were mapped in the north and outer north, with below average rates of current smokers in the city and to the east, south-east and north-east (Map 53), generally following the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

Both Playford West Central (with an SR of 124<sup>\*\*</sup>, 2,768 people) and - Elizabeth (124<sup>\*\*</sup>, 5,473) had almost one-quarter more current smokers than expected from the metropolitan regions' rate. Other SLAs with elevated ratios included Salisbury - Inner North (an SR of 115<sup>\*\*</sup>, 5,248 people), - Central (111<sup>\*\*</sup>, 5,615), Balance (105, 1,185) and - North-East (105<sup>\*\*</sup>, 4,397), Port Adelaide Enfield - Inner (110<sup>\*\*</sup>, 3,942), - Port (109<sup>\*\*</sup>, 5,064) and - Coast (107<sup>\*\*</sup>, 5,551) and Playford - West (107<sup>\*\*</sup>, 1,593) and - East Central (105<sup>\*\*</sup>, 3,638).

Relatively large numbers of smokers were estimated for the SLAs of Salisbury - South-East (6,570 people, an SR of 104<sup>\*\*</sup>), Tea Tree Gully - South (5,994, 98), Charles Sturt - Coastal (5,539, 98), Port Adelaide Enfield - East (5,424, 100), West Torrens - West (5,035, 99), Charles Sturt - North East (5,024, 104<sup>\*\*</sup>) and Tea Tree Gully - Central (5,018, 100).

A number of SLAs in the region had low estimated numbers of smokers, most typically those SLAs with high socioeconomic status. The lowest ratios, with around 15% fewer smokers than expected, included the SLAs of Burnside - North-East (an SR of 84<sup>\*\*</sup>, 3,050 people), Walkerville (84<sup>\*\*</sup>, 1,024) and Burnside - South-West (85<sup>\*\*</sup>, 3,113). There were also relatively low ratios in Unley - East (87<sup>\*\*</sup>, 3,170), Adelaide Hills - Central (88<sup>\*\*</sup>, 1,998) and - Ranges (90<sup>\*</sup>, 1,646), Adelaide (88<sup>\*\*</sup>, 3,385), Norwood Payneham and St Peters - West (90<sup>\*\*</sup>, 3,178), Unley - West (91<sup>\*\*</sup>, 2,904), Campbelltown - East (91<sup>\*\*</sup>, 4,590) and - West (94<sup>\*\*</sup>, 3,288), Prospect (93<sup>\*\*</sup>, 3,471), Norwood Payneham and St Peters - East (94<sup>\*\*</sup>, 2,766) and Tea Tree Gully - North (95<sup>\*\*</sup>, 4,637).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 53: Estimates of current smokers aged 18 years and over, CNAHS, 2001

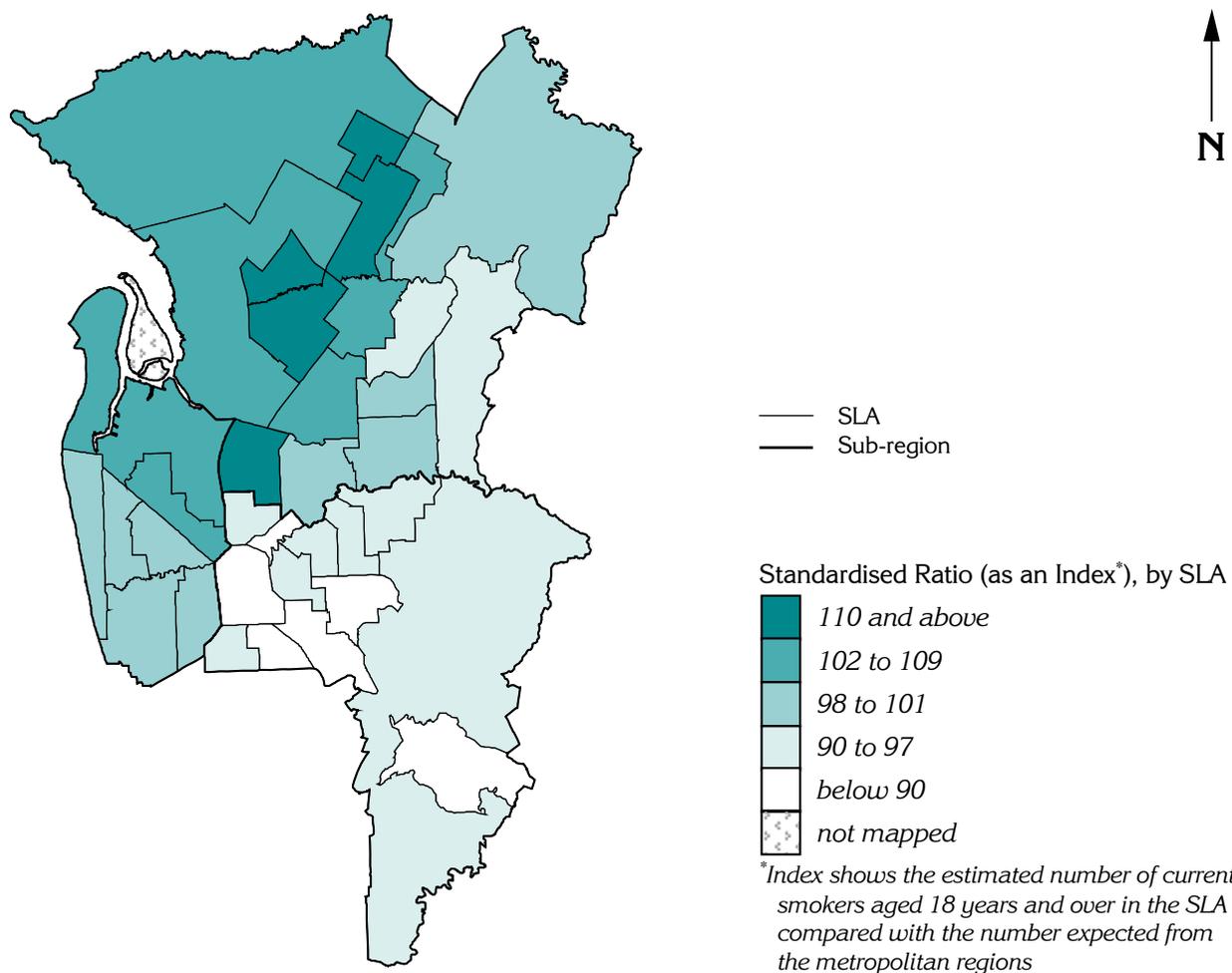


Table 54: Estimates of current smokers aged 18 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	22,826	218.5	88**
Quintile 2	26,641	233.8	95**
Quintile 3	31,106	247.2	100
Quintile 4	26,404	252.0	102**
Quintile 5: most disadvantaged areas	34,319	278.7	113**
<b>Rate ratio</b>	<b>..</b>	<b>1.28</b>	<b>1.28**</b>
<b>Northern</b>	<b>64,245</b>	<b>261.7</b>	<b>106**</b>
<b>Western</b>	<b>39,466</b>	<b>251.7</b>	<b>102**</b>
<b>Central East</b>	<b>37,584</b>	<b>221.3</b>	<b>89**</b>
<b>CNAHS</b>	<b>141,295</b>	<b>247.0</b>	<b>100</b>
<b>Southern</b>	<b>58,288</b>	<b>248.0</b>	<b>100</b>
<b>Metropolitan regions</b>	<b>199,583</b>	<b>247.3</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated risk factor prevalence: Physical inactivity

Estimated number of people aged 15 years and over who did not exercise in the two weeks prior to interview in the 2001 NHS

## Overview

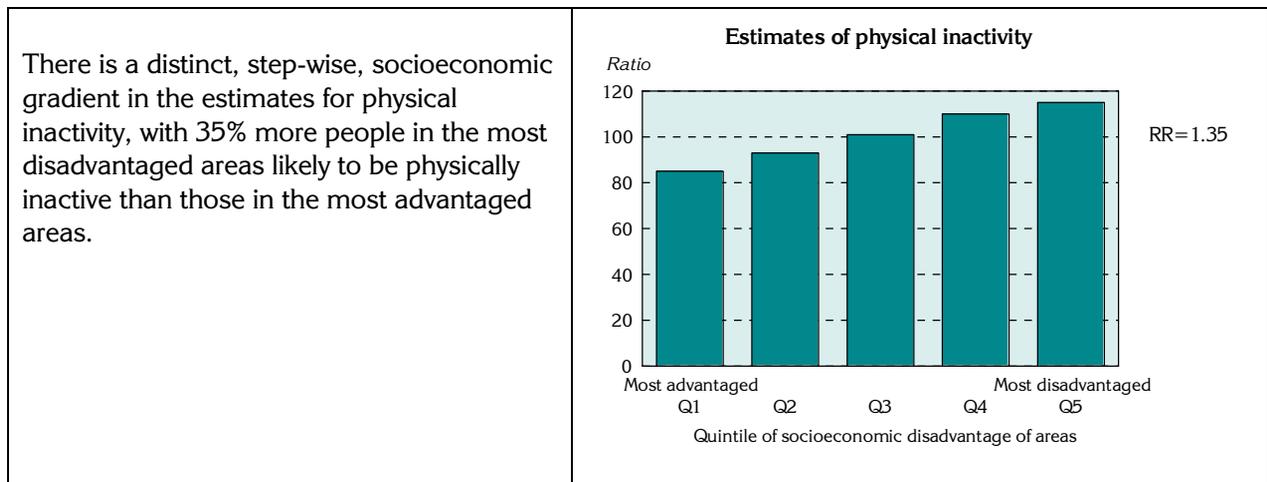
**Physical inactivity is defined as those aged 15 years and over who did not exercise in the two weeks prior to interview for the 2001 NHS, through sport, recreation or fitness (including walking). Physical inactivity as a risk factor has been estimated to cause the second highest burden of premature death and illness in Australia, after tobacco smoking<sup>63</sup>.**

In Central Northern, 192,153 people were estimated as being physically inactive (a standardised ratio (SR) of 101\*\*) (Table 55): however, there were notable variations in ratios across the region. Highly elevated ratios were mapped in a band of SLAs running from the north-west to the outer north, with low ratios in the city and adjacent SLAs to the east, south and south-east (Map 54), generally following the pattern of socioeconomic disadvantage seen in Map 23 (page 113).

Highly elevated ratios were mapped in the SLAs of Playford - West (an SR of 126\*\*, 2,397 people), Port Adelaide Enfield - Port (121\*\*, 7,810), Salisbury Balance (122\*\*, 1,548) and - Inner North (120\*\*, 6,305) and - Central (119\*\*, 7,647). Other SLAs with elevated SRs included Charles Sturt - North East (113\*\*, 7,311), Playford - West Central (112\*\*, 3,059) and - East Central (112\*\*, 4,523), Salisbury - South-East (111\*\*, 9,077) and - North-East (110\*\*, 5,813), Port Adelaide Enfield - Inner (111\*\*, 5,655) and Charles Sturt - Inner West (110\*\*, 7,046).

There were estimated to be large numbers of physically inactive people in the SLAs of Tea Tree Gully - South (8,047 people, an SR of 97\*\*), Port Adelaide Enfield - East (7,622, 105\*\*) and - Coast (7,467, 104\*\*), West Torrens - West (7,326, 97\*\*), Campbelltown - East (6,776, 100), Playford - Elizabeth (6,759, 108\*\*) and West Torrens - East (6,496, 104\*\*).

Low ratios were estimated for the SLAs of Adelaide (an SR of 79\*\*, 3,723 people), Burnside - South-West (82\*\*, 4,519), Norwood Payneham and St Peters - West (83\*\*, 3,813), Walkerville (83\*\*, 1,558), Adelaide Hills - Central (84\*\*, 2,536), Unley - East (85\*\*, 4,266) and - West (85\*\*, 3,626), Burnside - North East (86\*\*, 4,675), Adelaide Hills - Ranges (87\*\*, 2,105) and Charles Sturt - Coastal (90\*\*, 7,489).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 54: Estimates of physical inactivity, people aged 15 years and over, CNAHS, 2001

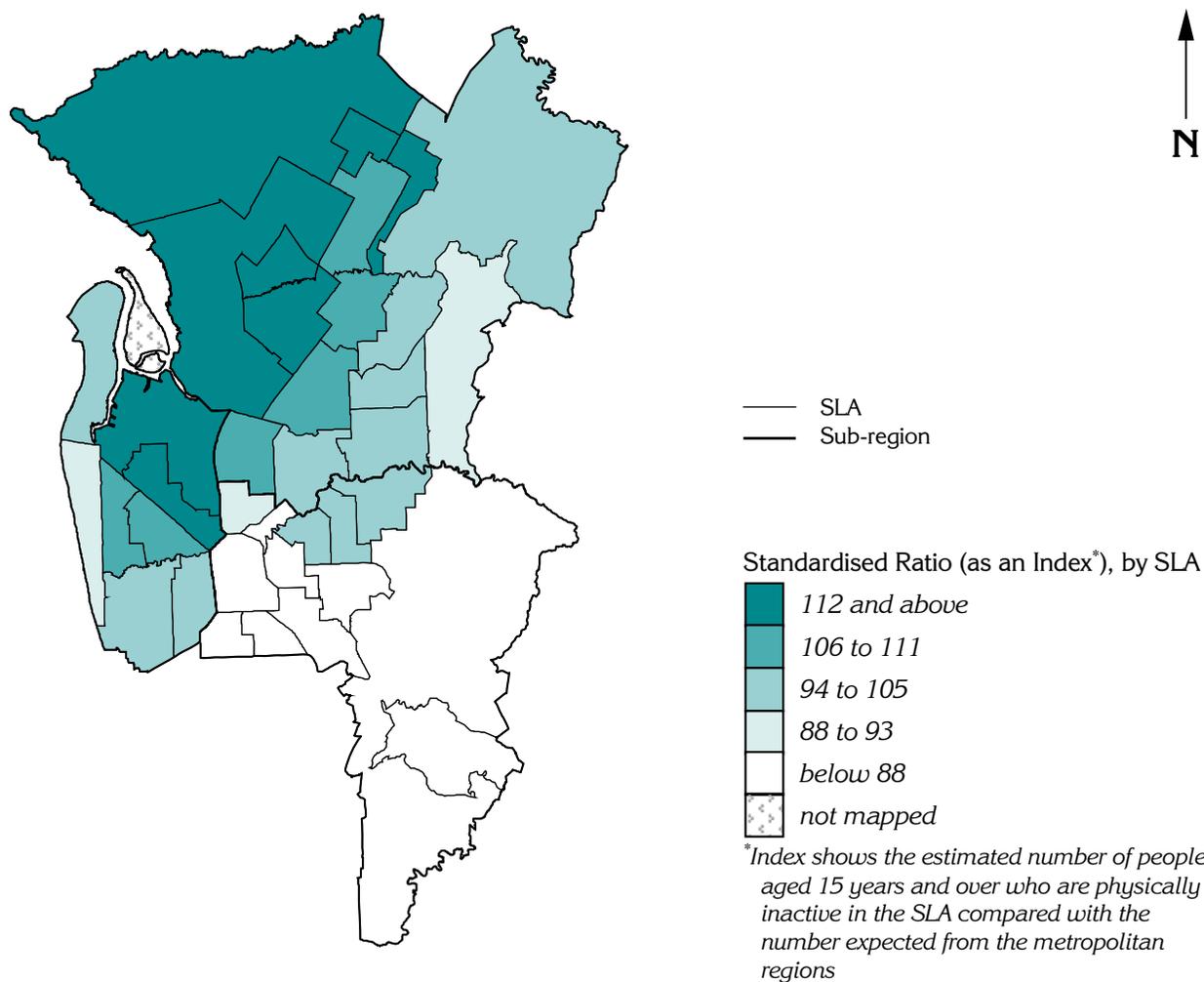


Table 55: Estimates of physical inactivity, people aged 15 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	30,544	270.3	85**
Quintile 2	34,066	295.2	93**
Quintile 3	43,289	322.1	101**
Quintile 4	38,159	348.8	110**
Quintile 5: most disadvantaged areas	46,094	365.9	115**
<b>Rate ratio</b>		<b>1.35</b>	<b>1.35**</b>
<b>Northern</b>	<b>83,602</b>	<b>341.3</b>	<b>107**</b>
<b>Western</b>	<b>57,149</b>	<b>333.9</b>	<b>105**</b>
<b>Central East</b>	<b>51,402</b>	<b>282.3</b>	<b>89**</b>
<b>CNAHS</b>	<b>192,153</b>	<b>321.2</b>	<b>101**</b>
<b>Southern</b>	<b>78,107</b>	<b>309.1</b>	<b>97**</b>
<b>Metropolitan regions</b>	<b>270,260</b>	<b>317.6</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Estimated risk factor prevalence: High health risk due to alcohol consumption

Estimated number of people aged 18 years and over who have a high health risk due to alcohol consumption as reported in the 2001 NHS

## Overview

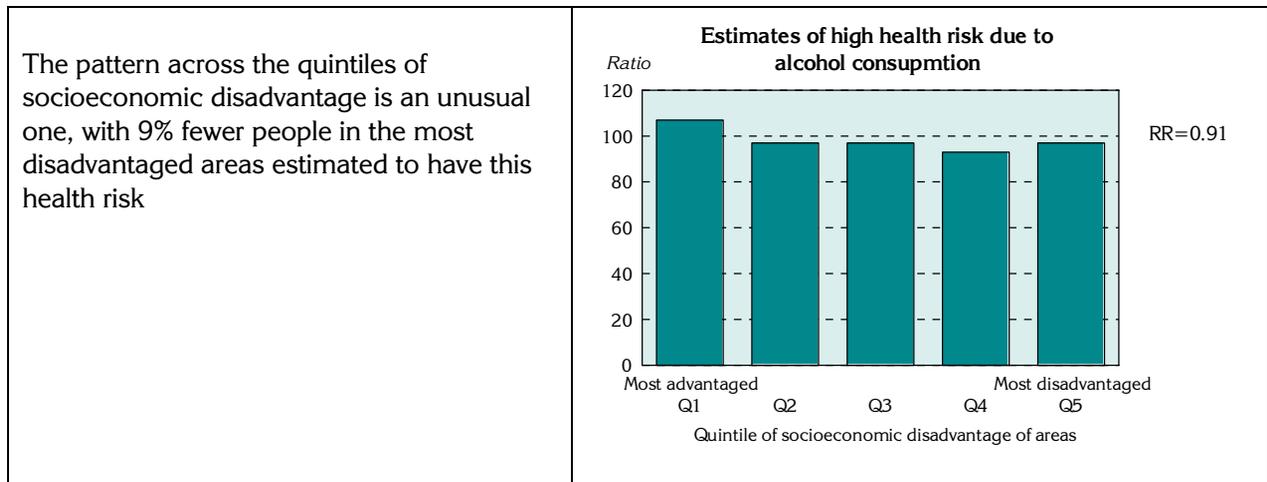
*The 2001 NHS also collected information on alcohol consumption, presented here as estimates of those at 'high health risk' due to alcohol consumed – defined as a daily consumption of more than 75 ml (three standard drinks) for males and 50 ml (two standard drinks) for females. Excessive alcohol consumption is a major risk factor for morbidity and mortality<sup>63</sup>.*

Central Northern had two per cent fewer people estimated as having a high health risk due to alcohol consumed than expected from the metropolitan rates (a standardised ration (SR) of 98<sup>\*\*</sup>, 22,151 people) (Table 56). Elevated SRs were mapped in SLAs scattered throughout the region (many in outer areas, as well as some adjacent to the city), with low SRs in the north-east and across much of the west and parts of the outer north (Map 55).

Within this region, there were highly elevated ratios in Playford - Elizabeth (an SR of 119<sup>\*\*</sup>, 824 people), - West Central (118<sup>\*\*</sup>, 401) and - Hills (113, 93), Norwood Payneham and St Peters - West (116<sup>\*\*</sup>, 632), Unley - West (113<sup>\*\*</sup>, 576) and - East (109<sup>\*</sup>, 627), Port Adelaide Enfield - Coast (109<sup>\*</sup>, 916), Adelaide Hills - Ranges (107, 332) and - Central (106, 397), Walkerville (106, 213) and Burnside - South-West (106, 637).

Large estimated numbers were calculated for Charles Sturt - Coastal (974 people, an SR of 103), Salisbury - South-East (966, 95), Tea Tree Gully - South (952, 96) and - Central (817, 103), Port Adelaide Enfield - East (816, 95) and West Torrens - West (774, 94) and - East (763, 102).

A number of SLAs in this region had low ratios of health risk due to alcohol consumption. These included Campbelltown - East (an SR of 80<sup>\*\*</sup>, 650 people) and - West (83<sup>\*\*</sup>, 460), Charles Sturt - Inner West (83<sup>\*\*</sup>, 607) and - North East (84<sup>\*\*</sup>, 652), Port Adelaide Enfield - Port (85<sup>\*\*</sup>, 629), Salisbury Balance (86, 148) and Charles Sturt - Inner East (88<sup>\*\*</sup>, 570).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 55: Estimates of high health risk due to alcohol consumption, people aged 18 years and over, CNAHS, 2001

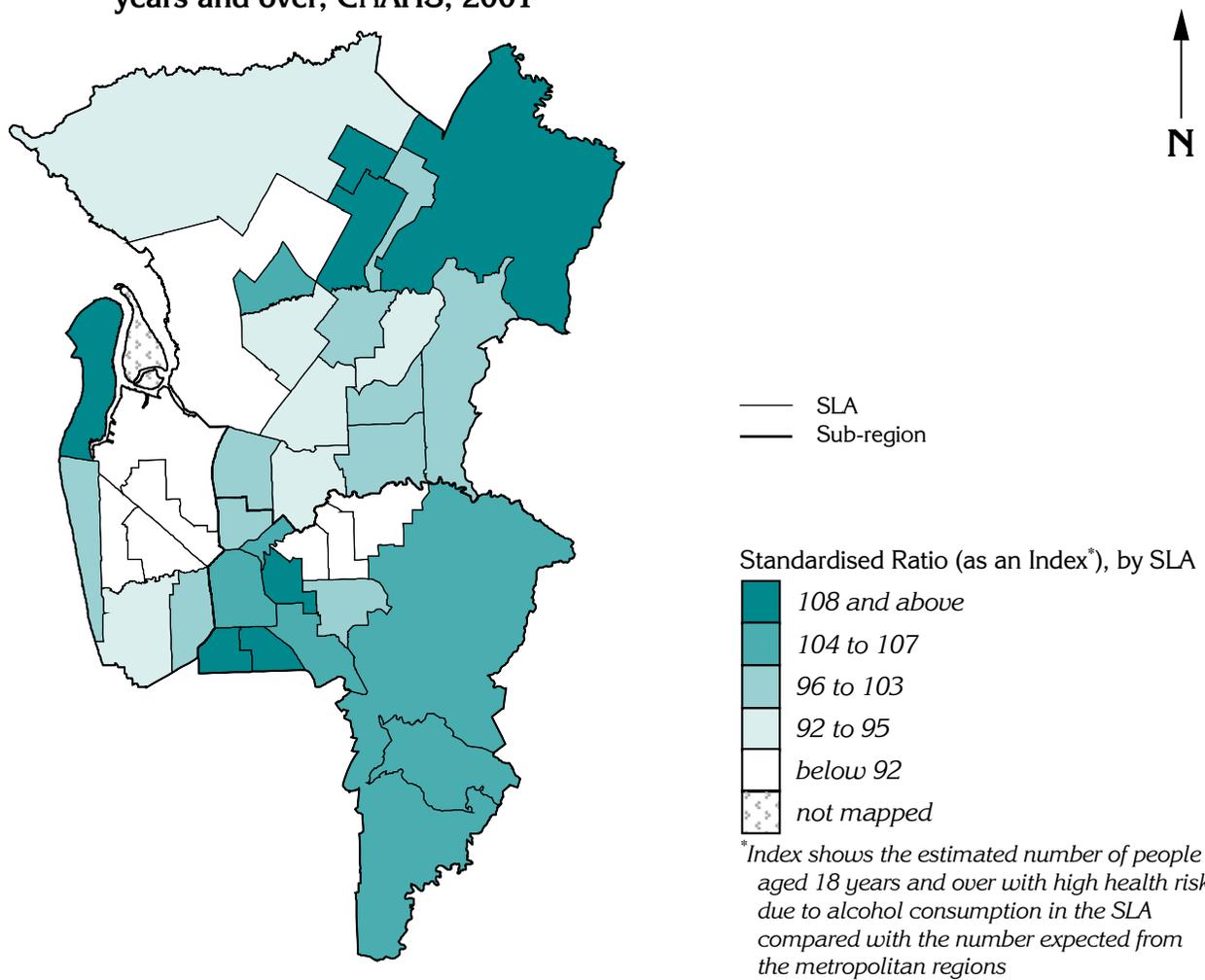


Table 56: Estimates of high health risk due to alcohol consumption, people aged 18 years and over, CNAHS, 2001

Area	Number	Rate*	Standardised ratio
<b>CNAHS</b>			
Quintile 1: most advantaged areas	4,488	42.4	107**
Quintile 2	4,334	38.3	97*
Quintile 3	4,834	38.5	97
Quintile 4	3,853	36.7	93**
Quintile 5: most disadvantaged areas	4,642	38.5	97
<b>Rate ratio</b>		<b>0.91</b>	<b>0.91**</b>
<b>Northern</b>	<b>9,554</b>	<b>39.4</b>	<b>100</b>
<b>Western</b>	<b>5,885</b>	<b>37.3</b>	<b>94**</b>
<b>Central East</b>	<b>6,712</b>	<b>39.6</b>	<b>99</b>
<b>CNAHS</b>	<b>22,151</b>	<b>38.9</b>	<b>98**</b>
<b>Southern</b>	<b>9,780</b>	<b>41.3</b>	<b>104**</b>
<b>Metropolitan regions</b>	<b>31,931</b>	<b>39.6</b>	<b>100</b>

\*Rate per 1,000 population

\* indicates statistical significance: see page 19

# Cancer Incidence: All cancers

Cancer incidence is defined as the number of cases first notified for a given population during a specific time period: data from 1998 to 2002

## Overview

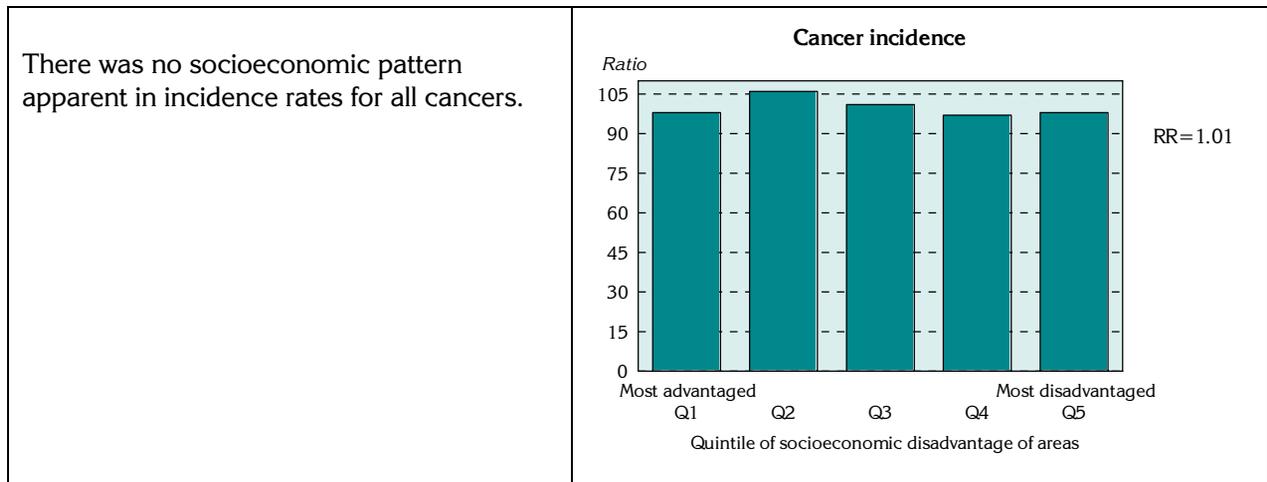
**Cancer is a diverse group of diseases in which some of the body's cells become defective, begin to multiply out of control, can invade and damage the tissue around them, and may also spread (metastasise) to other parts of the body to cause further damage <sup>63</sup>. Numerous factors increase a person's risk of developing cancer including ageing, tobacco smoking and alcohol consumption <sup>63</sup>.**

There were 19,112 new cases of cancer in Central Northern over the five years from 1998 to 2002 (Table 57). There is a relatively flat distribution across the region, with elevated rates showing no particular geographic pattern (Map56) .

Salisbury - Inner North had 25% more cases than expected (a standardised incidence ratio (SIR) of 125\*\* , 425 cases). There were also elevated standardised incidence ratios in Port Adelaide Enfield - Coast (an SIR of 117\*\* , 871 cases), Adelaide (115\*\* , 367), Tea Tree Gully - Central (111\*\* , 564), West Torrens - East (109\* , 731) and Prospect (107\* , 512).

Large numbers of new cases were recorded for people in Charles Sturt - Coastal (983 cases, an SIR of 103), West Torrens - West (932, 99), Tea Tree Gully - South (793, 100), Port Adelaide Enfield - East (776, 103), Charles Sturt - Inner West (746, 97), Port Adelaide Enfield - Port (724, 99), Salisbury - South-East (721, 99), Playford - Elizabeth (677, 102), Charles Sturt - North-East (688, 96), Campbelltown - East (669, 103), Burnside - South-West (655, 104) and - North-East (640, 95) and Port Adelaide Enfield - Inner (626, 100).

The lowest ratios were recorded in the SLAs of Playford - Hills (an SIR of 72\* , 39 new cases), Salisbury Balance (75\* , 51) and Salisbury - Central (80\* , 431), Playford - West (82\* , 124), Campbelltown - West (89\* , 571) and Norwood Payneham and St Peters - West (89\* , 427). Other SLAs with ratios below the State average were Charles Sturt - Inner East (90\*\* , 618), Norwood Payneham and St Peters - East (91\* , 516), Burnside - North-East (95, 640), Tea Tree Gully - Hills (93, 260) and Walkerville (94, 220).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 56: Cancer incidence, CNAHS, 1998 to 2002

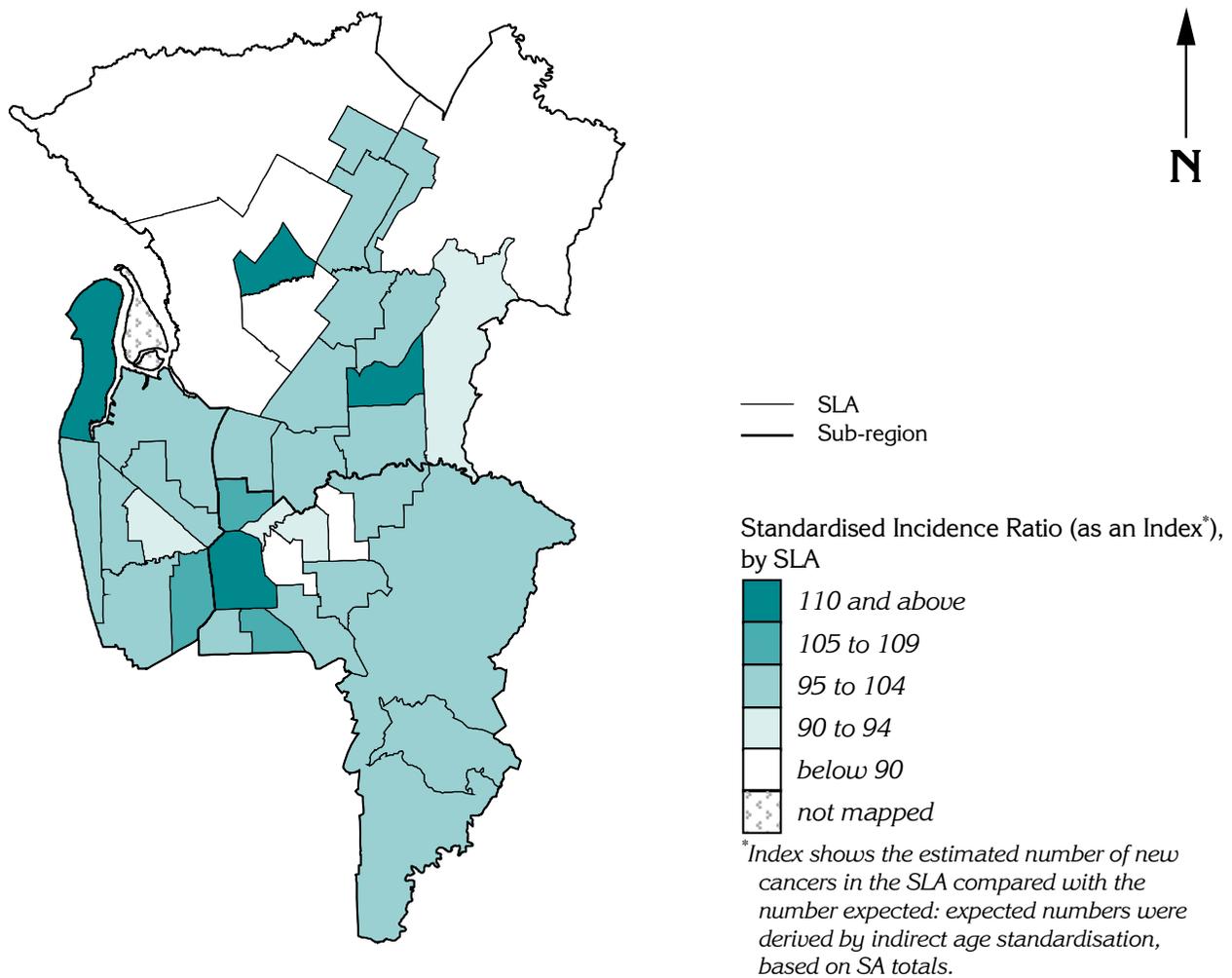


Table 57: Cancer incidence, CNAHS, 1998 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	3,689	98
Quintile 2	3,448	106**
Quintile 3	4,696	101
Quintile 4	3,422	97*
Quintile 5: most disadvantaged areas	3,855	98
<b>Rate ratio</b>	<b>..</b>	<b>1.01</b>
<b>Northern</b>	<b>6,793</b>	<b>100</b>
<b>Western</b>	<b>6,294</b>	<b>101</b>
<b>Central East</b>	<b>6,025</b>	<b>99</b>
<b>CNAHS</b>	<b>19,112</b>	<b>100</b>
<b>Southern</b>	<b>8,524</b>	<b>103*</b>
<b>Metropolitan regions</b>	<b>27,636</b>	<b>101</b>
<b>State total</b>	<b>38,085</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Cancer incidence: Lung cancer

Incidence of lung cancer among people aged 29 years and over: data from 1998 to 2002

## Overview

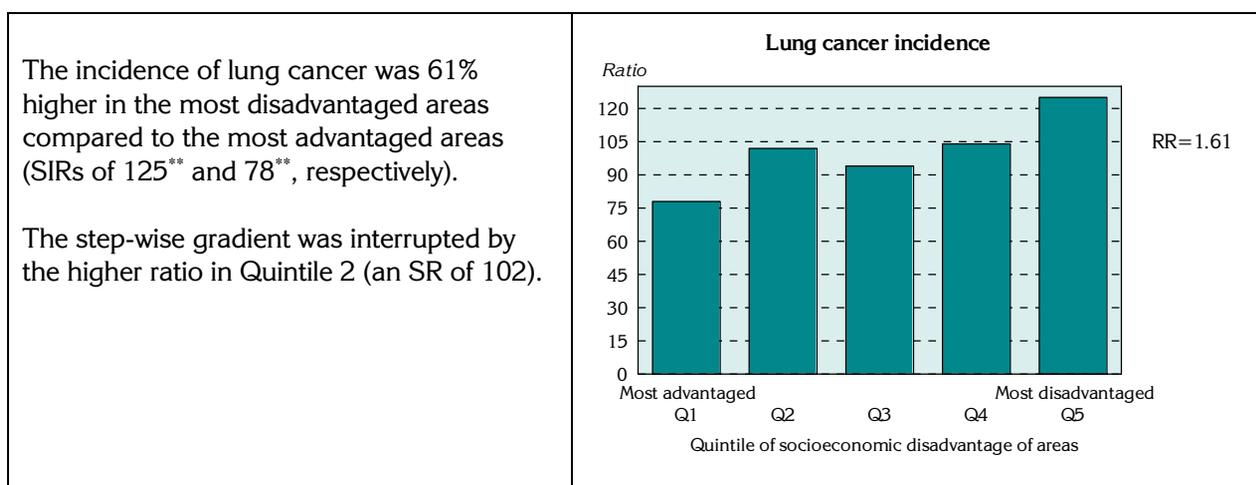
**Tobacco smoking is the commonest cause of lung cancer. Although overall rates of smoking are declining, the rate of lung cancer is still increasing due to the lag time, from the exposure to tobacco to the onset of lung cancer. There has been a decline in lung cancer in males following reduced smoking rates since the 1970s. The same trend has not been observed for females. Other causes of lung cancer include occupational exposures such as asbestos, radiation and other agents. The survival rate for lung cancer after five years is estimated at 12%. The population groups most at risk include people in low socioeconomic areas, Aboriginal and Torres Strait Islander females and males born overseas (excluding Asian born), particularly those born in the UK and Southern Europe<sup>75</sup>.**

There were 1,779 new cases of lung cancer in Central Northern from 1998 to 2002 (an SIR of 100) (Table 58). The SLAs with the most highly elevated standardised incidence ratios (SIRs) of lung cancer (Map 57) were located in the city, through the north-west and inner north, and in the outer north, generally following the pattern of socioeconomic disadvantage shown by the IRSD (Map 23, page 113).

The most highly elevated ratio, with nearly twice the expected number of cases, was in Salisbury - Inner North (an SIR of 198\*\*, 53 cases). There were also highly elevated ratios in Playford - West Central (an SIR of 138\*, 27 cases), Adelaide (138\*, 39), Port Adelaide Enfield - Coast (126\*, 88), Playford - East Central (133, 30), Port Adelaide Enfield - Port (126\*, 90), Salisbury - North-East (125, 48), Playford - Elizabeth (121, 78) and Port Adelaide Enfield - Inner (121, 76).

Relatively large numbers of new cases of lung cancer were recorded in West Torrens - West (82 cases, an SIR of 88), Charles Sturt - Coastal (78, 85) and Charles Sturt - Inner West (74, 98), Salisbury - South-East (73, 114), West Torrens - East (68, 106) and Tea Tree Gully - South (63, 88).

SLAs with fewer new cases of lung cancer than expected included Playford - West (eight cases, an SIR of 63), Norwood Payneham and St Peters - East (36, 64\*\*), Burnside - North-East (42, 66\*\*), Unley - East (32, 67\*), Walkerville (16, 70), Adelaide Hills - Ranges (12, 72), Campbelltown - West (46, 73\*), Burnside - South-West (44, 74\*) and Adelaide Hills - Central (19, 82).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 57: Incidence of lung cancer, people aged 20 years and over, CNAHS, 1998 to 2002

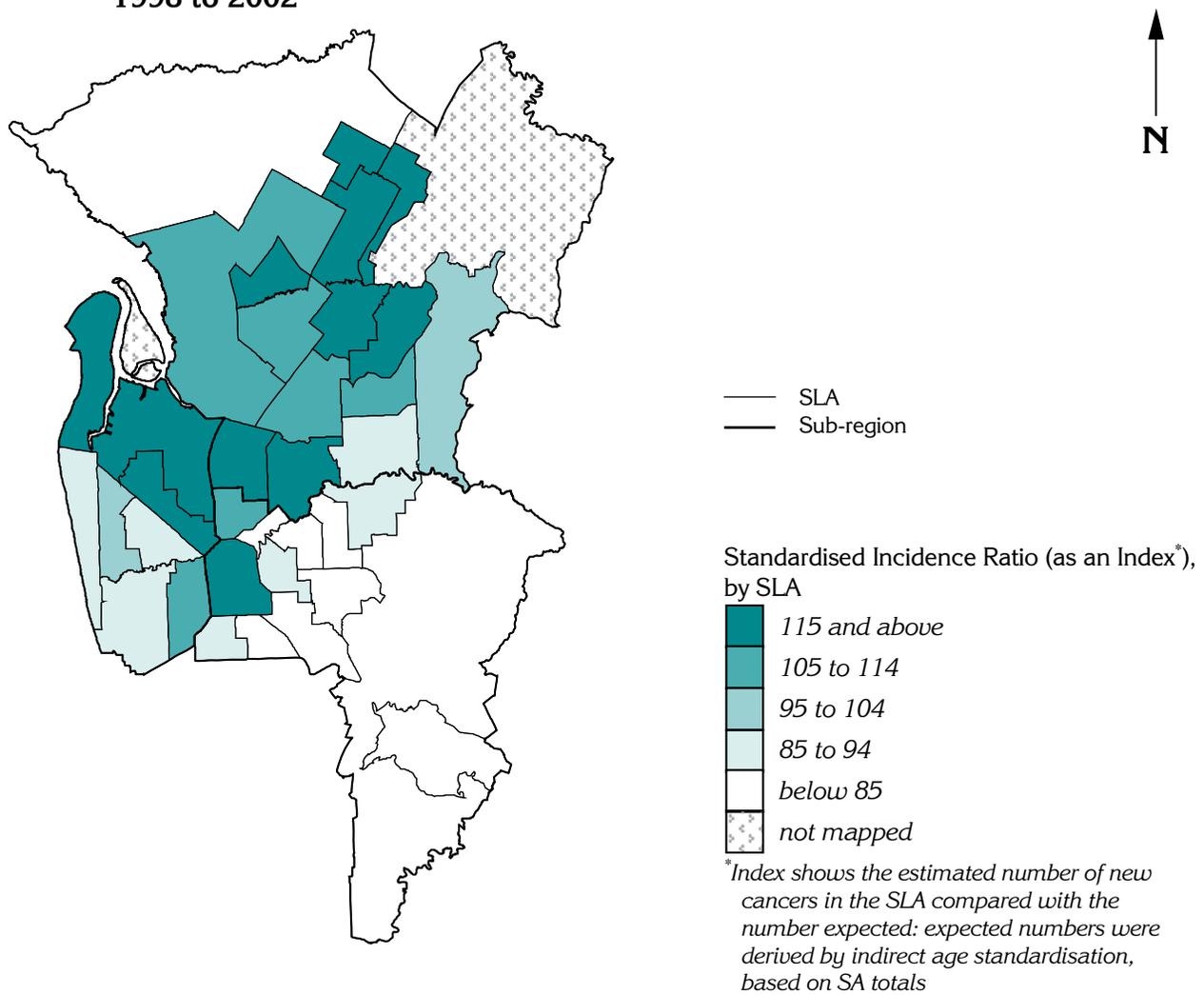


Table 58: Incidence of lung cancer, people aged 20 years and over, CNAHS, 1998 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	268	78 <sup>**</sup>
Quintile 2	298	102
Quintile 3	412	94
Quintile 4	345	104
Quintile 5: most disadvantaged areas	456	125 <sup>**</sup>
<b>Rate ratio</b>	<b>..</b>	<b>1.61<sup>**</sup></b>
<b>Northern</b>	<b>701</b>	<b>116<sup>**</sup></b>
<b>Western</b>	<b>616</b>	<b>103</b>
<b>Central East</b>	<b>462</b>	<b>82<sup>**</sup></b>
<b>CNAHS</b>	<b>1,779</b>	<b>100</b>
<b>Southern</b>	<b>777</b>	<b>100</b>
<b>Metropolitan regions</b>	<b>2,556</b>	<b>100</b>
<b>State total</b>	<b>3,527</b>	<b>100</b>

<sup>\*</sup> indicates statistical significance: see page 19

# Cancer incidence: Female breast cancer

*Incidence of breast cancer for women aged 30 years and over: data from 1998 to 2002*

## Overview

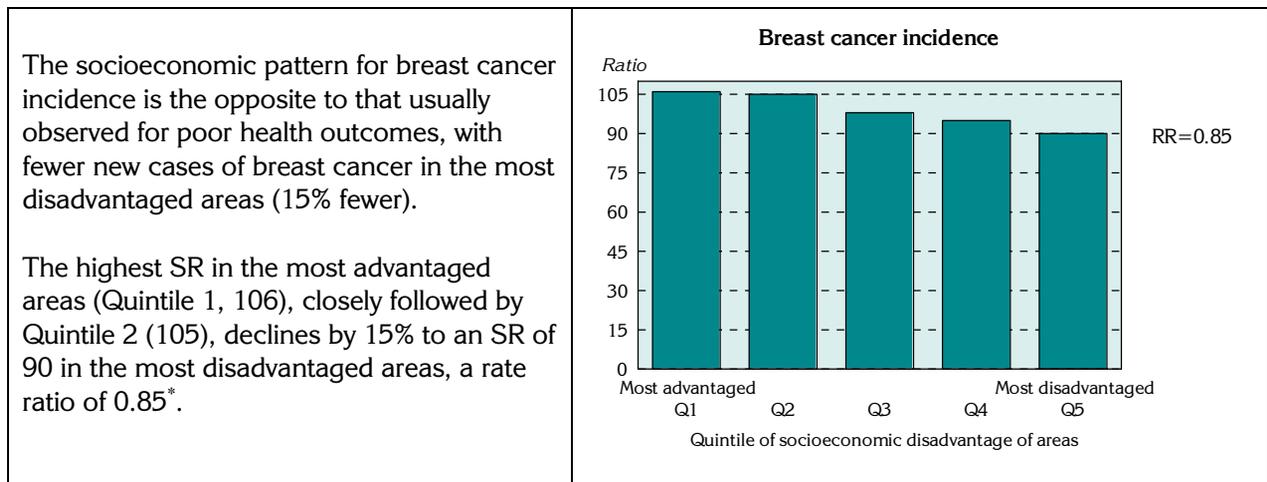
**Breast cancer is the most commonly diagnosed cancer, and is also the commonest cause of cancer death in women in Australia. The incidence of breast cancer increases with age. Women of high socioeconomic status are at greater risk of breast cancer than women of low socioeconomic status with possible reasons including differences in reproductive factors, lifestyle factors, and greater numbers of higher educated women attending mammography screening. Other factors implicated in the development of breast cancer include family history, parity, length of menstrual cycle, breast feeding, diethylstilbestrol use during pregnancy, infertility, spontaneous and induced abortion, radiation exposure, physical activity, stress, height, alcohol consumption, smoking and dietary factors<sup>76, 77</sup>. The five-year survival rate for breast cancer is 78%<sup>75</sup>.**

There were 2,472 new cases of breast cancer in Central Northern (an SIR of 99) (Table 59). The overall pattern suggests higher incidence of breast cancer in areas of higher socioeconomic status (Map 58).

Unlike other patterns of disease mapped in this atlas, many of the most highly elevated ratios of breast cancer were mapped in the advantaged SLAs. Walkerville had the highest standardised incidence ratio (SIR), with 32% more cases than expected from the State rates (an SIR of 132, 40 cases), followed by Burnside - South-West (120, 98), Unley - West (115, 67) and - East (114, 74), Tea Tree Gully - North (114, 66) and - Central (112, 88), and Port Adelaide Enfield - Inner (112, 80).

There were a large number of new cases of breast cancer in West Torrens - West (115 cases, an SIR of 104), Tea Tree Gully - South (113, 104) and Port Adelaide Enfield - Coast (103, 104).

The SLAs with the lowest ratios were Playford - West (an SIR of 36\*\*, eight cases), Salisbury Balance (41\*, five), Playford - Hills (56, five), Salisbury - Central (75\*, 55), Charles Sturt - North-East (71\*\*, 80), Playford - East Central (82, 34), Charles Sturt - Inner East (83, 66), Norwood Payneham and St Peters - West (83, 52), Campbelltown - East (83, 79), Playford - West Central (84, 26) and Norwood Payneham and St Peters - East (88, 60).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 58: Incidence of female breast cancer, 30 years and over, CNAHS, 1998 to 2002

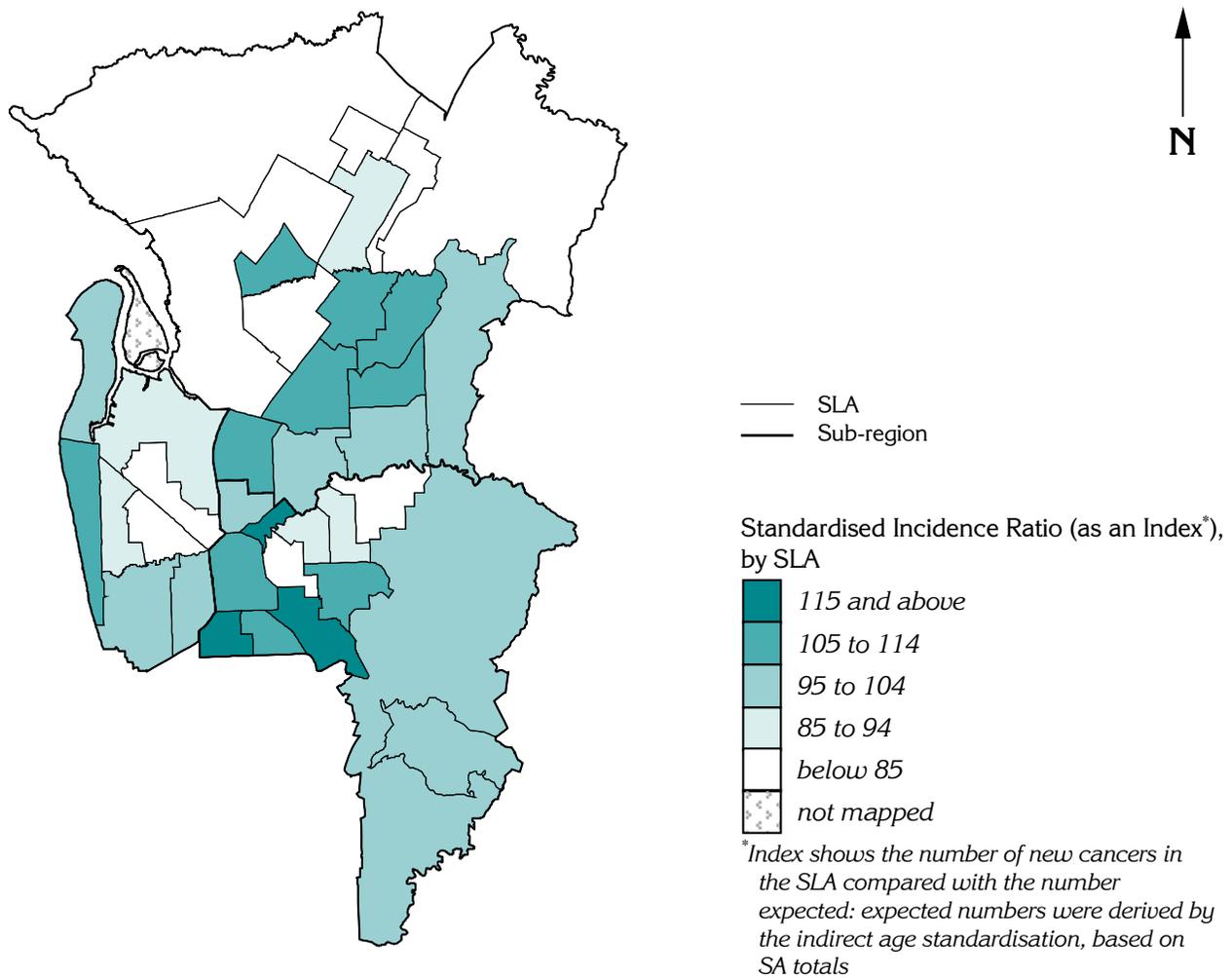


Table 59: Incidence of female breast cancer, CNAHS, 1998 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	541	106
Quintile 2	473	105
Quintile 3	572	98
Quintile 4	437	95
Quintile 5: most disadvantaged areas	450	90*
<b>Rate ratio</b>	..	<b>0.85*</b>
<b>Northern</b>	<b>934</b>	<b>98</b>
<b>Western</b>	<b>734</b>	<b>96</b>
<b>Central East</b>	<b>804</b>	<b>102</b>
<b>CNAHS</b>	<b>2,472</b>	<b>99</b>
<b>Southern</b>	<b>1,187</b>	<b>109**</b>
<b>Metropolitan regions</b>	<b>3,659</b>	<b>102</b>
<b>State total</b>	<b>4,938</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Cancer incidence: Prostate cancer

*Incidence of prostate cancer for males aged 50 years and over: data from 1998 to 2002*

## Overview

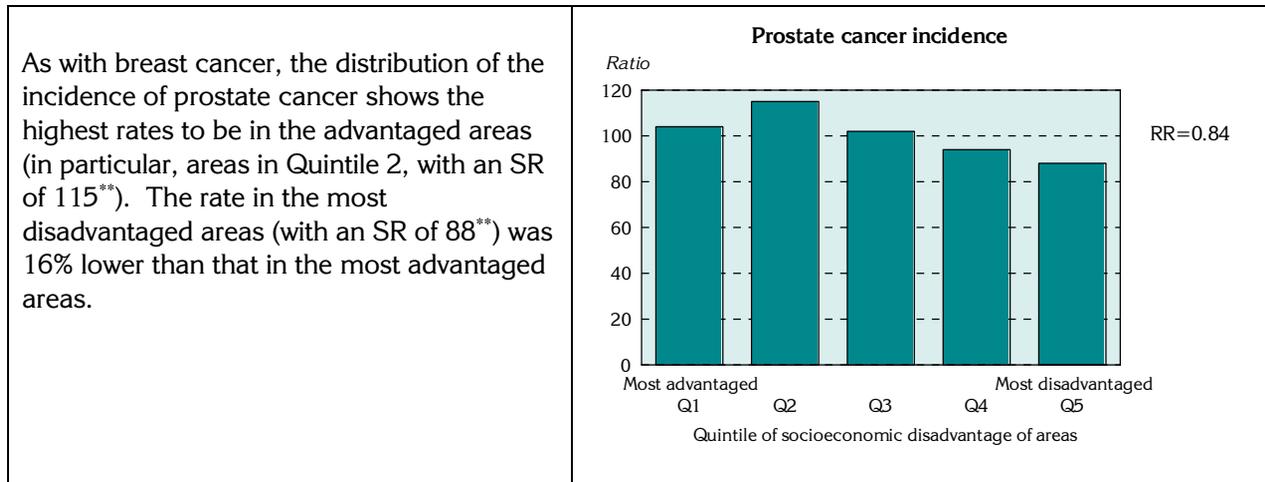
***Apart from non-melanoma skin cancer, cancer of the prostate is the most commonly diagnosed cancer among South Australian males; and it is the second commonest cause of cancer deaths in South Australian men <sup>78</sup>. The incidence of prostate cancer increases with age. At the present time, the exact cause of prostate cancer is not known; therefore active prevention is not possible. Prostate cancer has been associated with Western-style high fat diets, alcohol, smoking, occupational exposure to cadmium and rubber, urban residence and a positive family history of the disease <sup>78</sup>.***

There were 2,511 new cases of prostate cancer in Central Northern in 1998-2002 (100) (Table 60). The SLAs with the most highly elevated ratios were largely concentrated in the more advantaged SLAs of the east, the north-east and north-west, although some of these also had lower incidence (Map 59).

Very highly elevated ratios, with over one third more cases than expected from the State rates, were recorded in Port Adelaide Enfield - Coast (an SIR of 144<sup>\*\*</sup>, 136 cases), Salisbury - Inner North (138<sup>\*</sup>, 53) and Adelaide Hills - Ranges (131, 32). There were also highly elevated ratios in Tea Tree Gully - Central (an SIR of 130<sup>\*</sup>, 80 cases), Campbelltown - East (125<sup>\*</sup>, 101), Tea Tree Gully - Hills (122, 40), Adelaide (119, 50), Burnside - South-West (117, 93) and - North-East (116, 101) and Tea Tree Gully - North (115, 43) and Prospect (113, 66).

There were large numbers of new cases of prostate cancer recorded for men in Charles Sturt - Coastal (134 cases, an SIR of 100), West Torrens - West (119, 89), Tea Tree Gully - South (114, 108), Port Adelaide Enfield - East (109, 107), West Torrens - East (100, 109), Charles Sturt - Inner West (97, 91), - Inner East (87, 89) and - North-East (87, 89).

The SLAs with ratios below the State average were Unley - West (an SIR of 69<sup>\*</sup>, 34 cases), Salisbury - Central (71<sup>\*</sup>, 50), Norwood Payneham and St Peters - East (77, 57), Salisbury - South-East (78<sup>\*</sup>, 75), Port Adelaide Enfield - Inner (81, 73), Norwood Payneham and St Peters - West (81, 47), Salisbury Balance (83, six) and Port Adelaide Enfield - Port (84, 87).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 59: Incidence of prostate cancer, males aged 50 years and over, CNAHS, 1998 to 2002

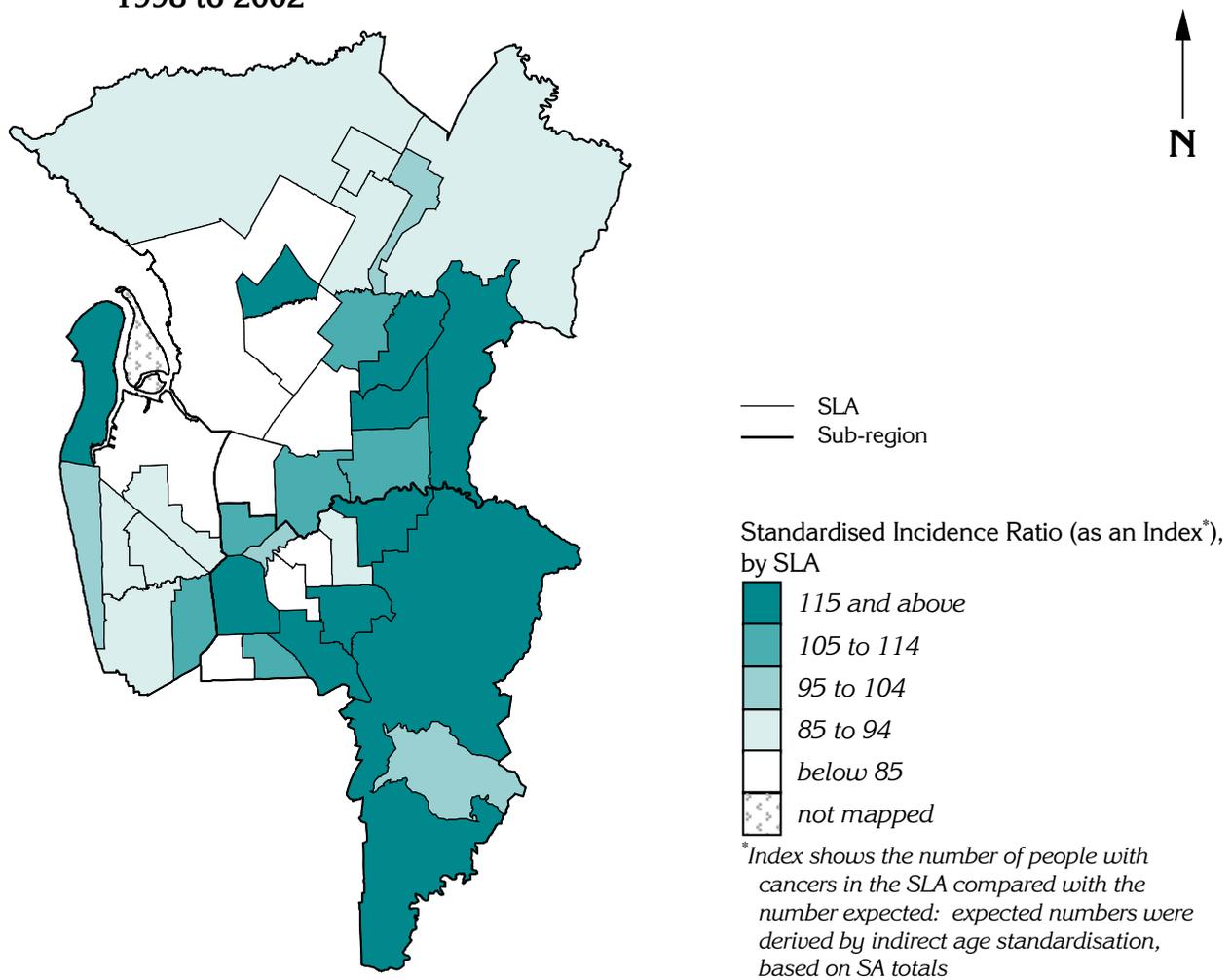


Table 60: Incidence of prostate cancer, males aged 50 years and over, CNAHS, 1998 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	486	104
Quintile 2	474	115**
Quintile 3	645	102
Quintile 4	445	94
Quintile 5: most disadvantaged areas	461	88**
<b>Rate ratio</b>	<b>..</b>	<b>0.84**</b>
<b>Northern</b>	<b>865</b>	<b>99</b>
<b>Western</b>	<b>848</b>	<b>99</b>
<b>Central East</b>	<b>798</b>	<b>102</b>
<b>CNAHS</b>	<b>2,511</b>	<b>100</b>
<b>Southern</b>	<b>1,122</b>	<b>103</b>
<b>Metropolitan regions</b>	<b>3,633</b>	<b>101</b>
<b>State total</b>	<b>5,118</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Premature mortality: Infant deaths

Infant mortality rate (IMR) – infant deaths (deaths before 12 months of age) per 1,000 live births: data for 1999 to 2002

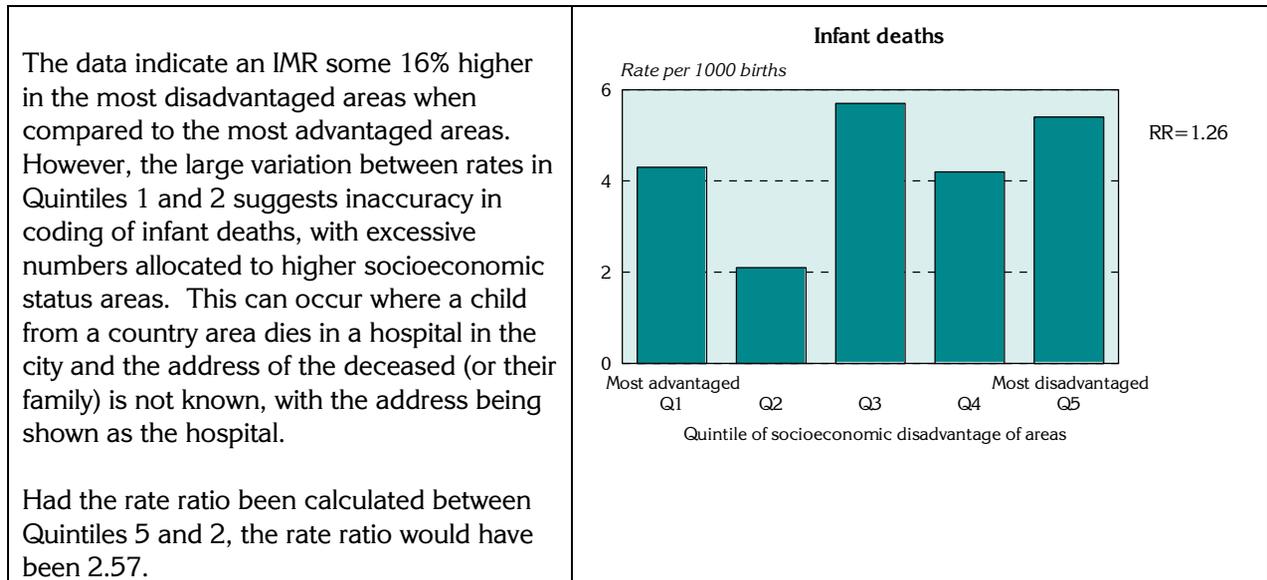
## Overview

*Death in infancy represents the earliest indicator of premature mortality. Most infant deaths occur in the first four weeks of life, from conditions originating in the perinatal period . These conditions include spontaneous preterm labour, infections, hypertension, haemorrhage and maternal conditions affecting the newborn. Congenital abnormalities and Sudden Infant Death Syndrome (SIDS) account for many of the remaining deaths <sup>79</sup>. Following a national Reducing the Risks Campaign, which commenced in 1991, there has been a dramatic fall in the overall number of SIDS deaths, but a less substantial decline for Indigenous SIDS deaths.*

Due to the small numbers of deaths at an SLA level, SLAs have been aggregated to the larger areas used to present the Burden of Disease (BoD) estimates, presented later in this section: these are referred to as BoD areas (Map 60). In Central Northern region, there were 161 infant deaths, 4.5 infant deaths per 1,000 live births (Table 61). The map shows high and low rates occurring across the region, with no clear pattern other than the generally higher rates in the outer north: the small numbers of infant deaths across the eastern suburbs causing the rates not to be calculated (despite reasonable numbers of births) suggests the rates here are low (Map 60).

There was considerable variation in IMRs within this region, with the highest IMR recorded for Salisbury - Central (an IMR of 10.8, 16 deaths). The SLAs of Port Adelaide Enfield - Inner (with an IMR of 8.4, nine deaths), Unley - West (7.5, five deaths), Tea Tree Gully - South (6.9, ten deaths), Playford - East Central (6.6, eight deaths), Playford - Elizabeth (6.5, ten) and Port Adelaide Enfield - Coast (6.5, eight) all had high infant mortality rates.

In contrast to Salisbury - Central which had the highest IMR, Salisbury - South-East had the lowest in the region (an IMR of 2.9, although a small number of five deaths). Other SLAs with low IMRs included Tea Tree Gully - North (3.5, five deaths), Charles Sturt - North-East (3.6, five) and Salisbury - Inner North (3.8, six).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 60: Infant deaths, CNAHS, 1999 to 2002

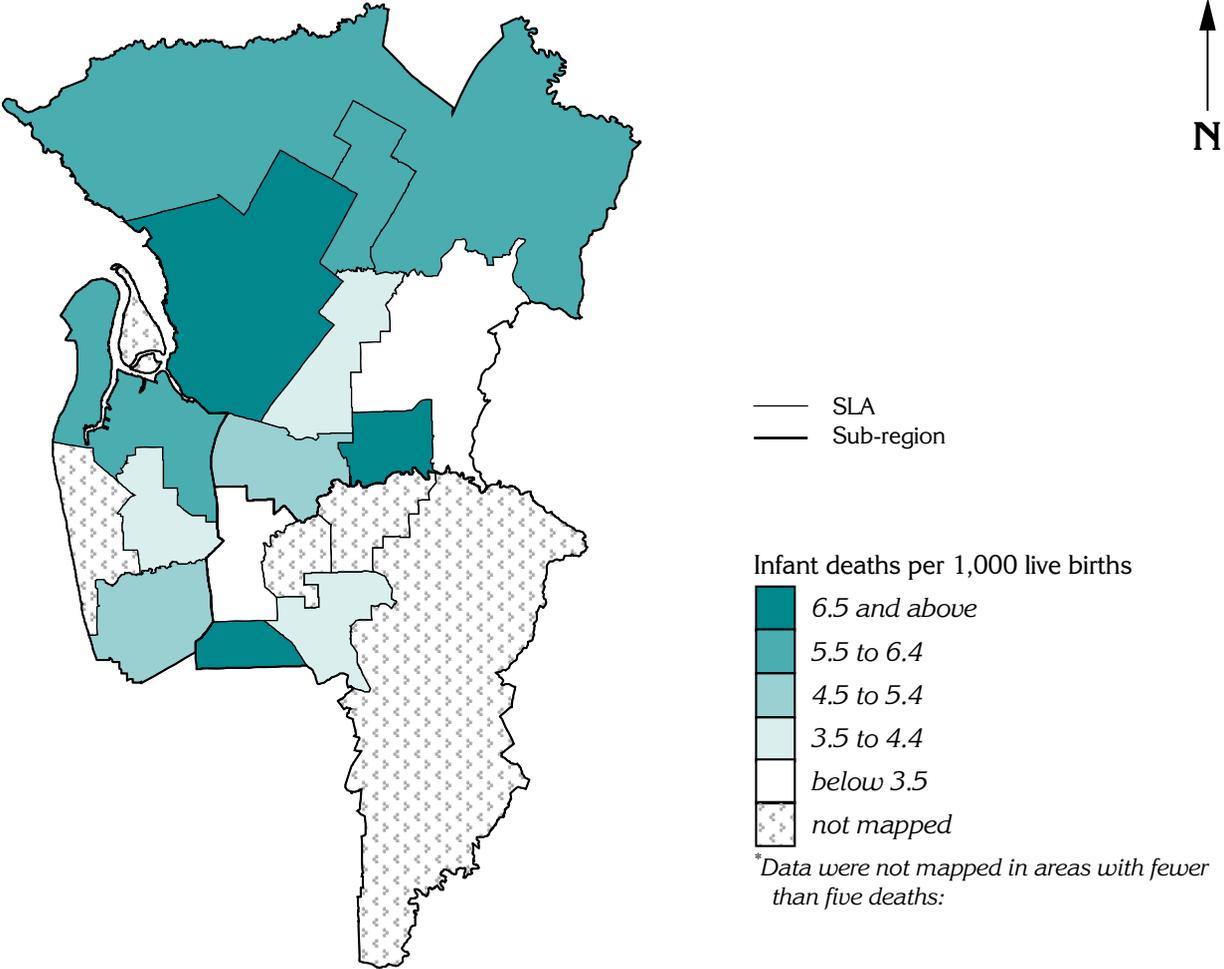


Table 61: Infant deaths, CNAHS, 1999 to 2002

Area	Number	Rate <sup>1</sup>
<b>CNAHS</b>		
Quintile 1: most advantaged areas	24	4.3
Quintile 2	13	2.1
Quintile 3	43	5.7
Quintile 4	27	4.2
Quintile 5: most disadvantaged areas	54	5.4
<b>Rate ratio</b>	..	<b>1.26</b>
<b>Northern</b>	<b>90</b>	<b>5.1</b>
<b>Western</b>	<b>40</b>	<b>4.4</b>
<b>Central East</b>	<b>31</b>	<b>3.5</b>
<b>CNAHS</b>	<b>161</b>	<b>4.5</b>
<b>Southern</b>	<b>64</b>	<b>4.5</b>
<b>Metropolitan regions</b>	<b>226</b>	<b>4.5</b>
<b>State total</b>	<b>329</b>	<b>4.5</b>

<sup>1</sup>per 1000 live births

# Premature mortality: Deaths of males aged 15 to 64 years

Male deaths at ages 15 to 64 years: data for 1999 to 2002

## Overview

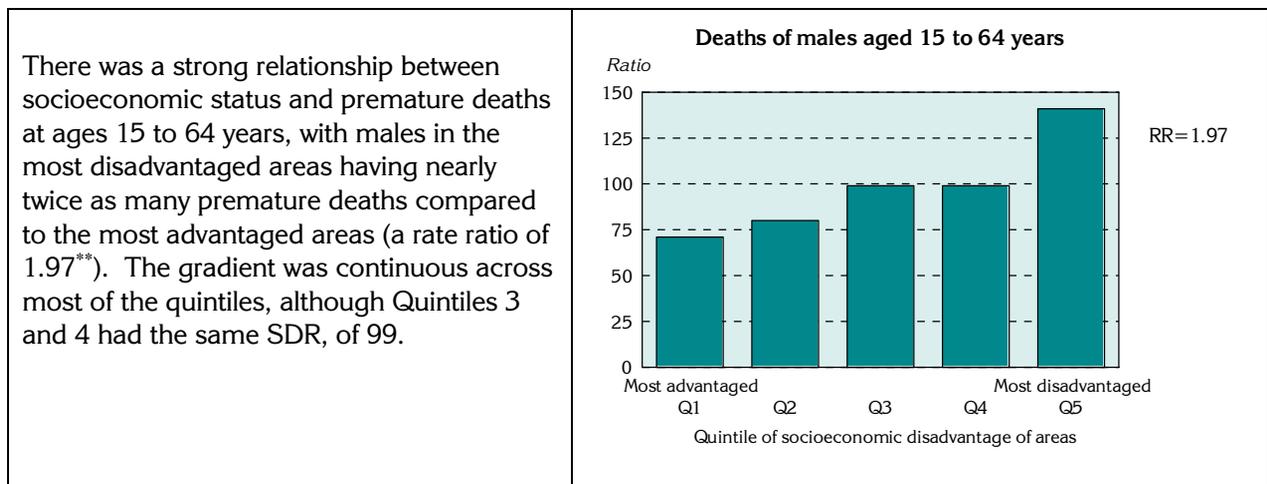
*Deaths before 65 years of age are clearly premature, given the life expectancy of males South Australian males of 77.5 years over this period. Malignant neoplasms (cancer), diseases of the circulatory system and the combined external causes of accidents, poisonings and violence were the main causes of premature death for males. Males most likely to die prematurely include Aboriginal and Torres Strait Islander men; those who are homeless, or who live in sheltered accommodation or low cost boarding houses; those earning low incomes; and those who are unemployed <sup>80</sup>.*

The standardised death ratio (SDR) for 15 to 64 year old males was two per cent lower than expected in the Central Northern region, with an SDR of 98 and (2,611 deaths) (Table 62). The pattern of SDRs at the SLA level (Map 61) is consistent with the pattern of socioeconomic disadvantage seen in Map 23 (page 113).

Several SLAs had ratios elevated by more than 30 per cent, including Playford - West Central (an SDR of 187<sup>\*\*</sup>, 76 deaths) Port Adelaide Enfield - Port (169<sup>\*\*</sup>, 143), Salisbury Balance (165<sup>\*</sup>, 22), Playford - Elizabeth (158<sup>\*\*</sup>, 131), Port Adelaide Enfield - Coast (139<sup>\*\*</sup>, 135), Port Adelaide Enfield - Inner (135<sup>\*\*</sup>, 82), Adelaide (135<sup>\*\*</sup>, 76) and Charles Sturt - North-East (130<sup>\*\*</sup>, 107).

Large numbers of deaths were recorded for males in Salisbury - South-East (118 deaths, an SDR of 91), Port Adelaide Enfield - East (111, 114), Salisbury - Central (107, 116) and Tea Tree Gully - South (103, 80<sup>\*</sup>).

A number of SLAs had ratios in the lowest range, including Tea Tree Gully - Hills (an SDR of 41<sup>\*\*</sup>, 22 deaths), Adelaide Hills - Ranges (43<sup>\*\*</sup>, 17), Adelaide Hills - Central (50<sup>\*\*</sup>, 26), Burnside - North East (61<sup>\*\*</sup>, 50), Playford - East Central (61<sup>\*\*</sup>, 35), Tea Tree Gully - North (66<sup>\*\*</sup>, 54), Tea Tree Gully - Central (68<sup>\*\*</sup>, 67), Walkerville (73, 20), Unley - West (75, 43), Charles Sturt - Coastal (76<sup>\*\*</sup>, 90) and Campbelltown - East (77<sup>\*</sup>, 81).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 61: Deaths of males aged 15 to 64 years, CNAHS, 1999 to 2002

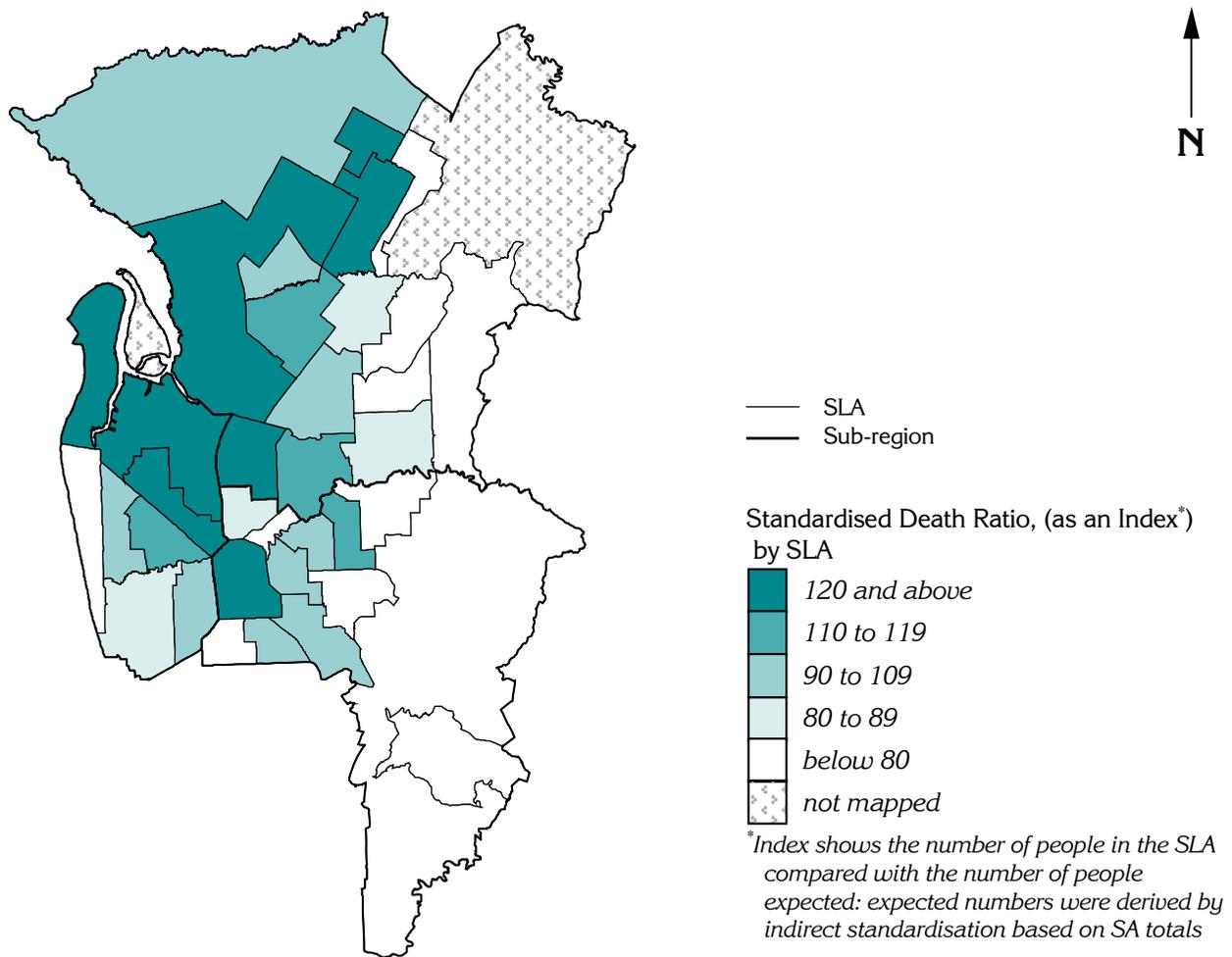


Table 62: Deaths of males aged 15 to 64 years, CNAHS, 1999 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	371	71**
Quintile 2	421	80**
Quintile 3	576	99
Quintile 4	497	99
Quintile 5: most disadvantaged areas	746	141**
<b>Rate ratio</b>	<b>..</b>	<b>1.97**</b>
<b>Northern</b>	<b>1,110</b>	<b>98</b>
<b>Western</b>	<b>814</b>	<b>112**</b>
<b>Central East</b>	<b>687</b>	<b>86</b>
<b>CNAHS</b>	<b>2,611</b>	<b>98</b>
<b>Southern</b>	<b>977</b>	<b>88**</b>
<b>Metropolitan regions</b>	<b>3,609</b>	<b>96**</b>
<b>State total</b>	<b>5,295</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Premature mortality: Deaths of females aged 15 to 64 years

Female deaths at ages 15 to 64 years: data for 1999 to 2002

## Overview

*Deaths before 65 years of age are clearly premature, given the life expectancy of females South Australian males of 82.7 years over this period. As for males, cancer was the main cause of premature death for females, followed by diseases of the circulatory system and the combined causes of accidents, poisonings and violence. Females most likely to die prematurely include Aboriginal and Torres Strait Islander women; single mothers; those earning low incomes; and those who were unemployed <sup>81</sup>.*

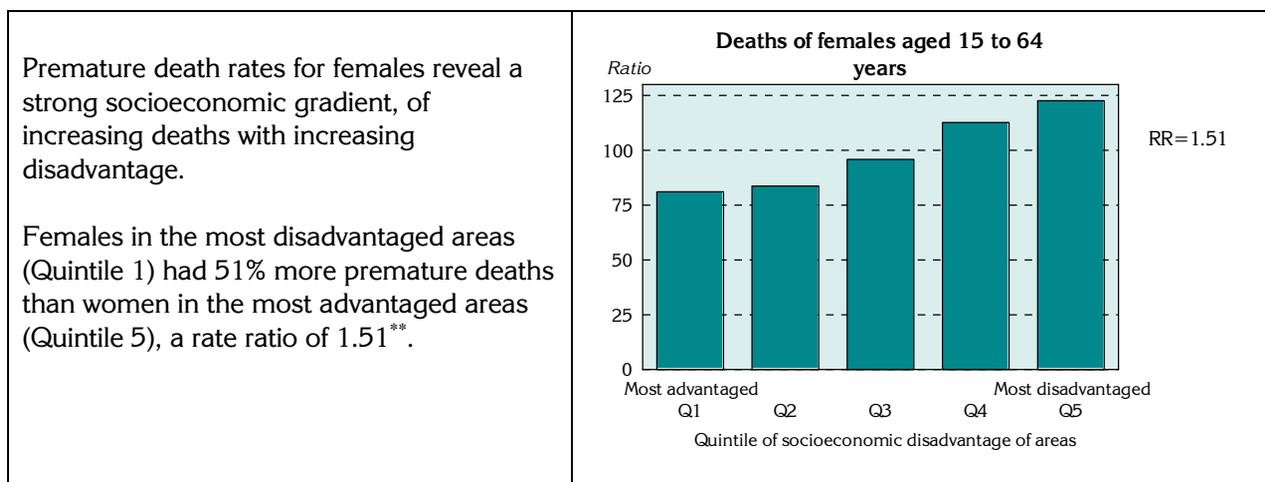
There were 1,541 premature female deaths in the Central Northern region, one per cent fewer deaths than expected from the State rates (Table 63). The pattern of standardised death ratios (SDRs) at the SLA level (Map 62) is generally consistent with the pattern of socioeconomic disadvantage seen in Map 23 (page 113).

Despite having a regional SDR which is close to average, there is considerable variation throughout the region, from 70% more premature deaths than expected from the State rates in Playford - West Central (an SDR of 170\*\*, 39 deaths), to 56% fewer in Adelaide Hills Ranges (44\*\*, ten deaths).

There were also elevated ratios in the SLAs of Playford - Elizabeth (an SDR of 146\*\*, 75 deaths), Unley - East (140\*, 53), Port Adelaide Enfield - Inner (138\*, 51), Port Adelaide Enfield - East (124, 71), Salisbury - South-East (124\*, 88), Campbelltown - West (122, 47), Salisbury - Central (120, 63), Port Adelaide Enfield - Port (119, 57) and Charles Sturt - Inner East (118, 50).

SLAs with the lowest ratios in the region included Burnside - North-East (an SDR of 48\*\*, 24 deaths), Tea Tree Gully - North (63\*, 29), Burnside - South-West (71\*, 32), West Torrens - West (73\*, 43), Tea Tree Gully - Central (74\*, 43), Adelaide Hills - Central (74, 21), Norwood Payneham and St Peters - East (77, 26) and Salisbury Balance (79, seven).

There were large numbers of premature deaths in the SLAs of Tea Tree Gully - South (72 deaths, an SDR of 96), Charles Sturt - Coastal (68 deaths, 92), Port Adelaide Enfield - Coast (63 deaths, 107), Port Adelaide Enfield - Port (57 deaths, 119) and Campbelltown - East (55 deaths, 82).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 62: Deaths of females aged 15 to 64 years, CNAHS, 1999 to 2002

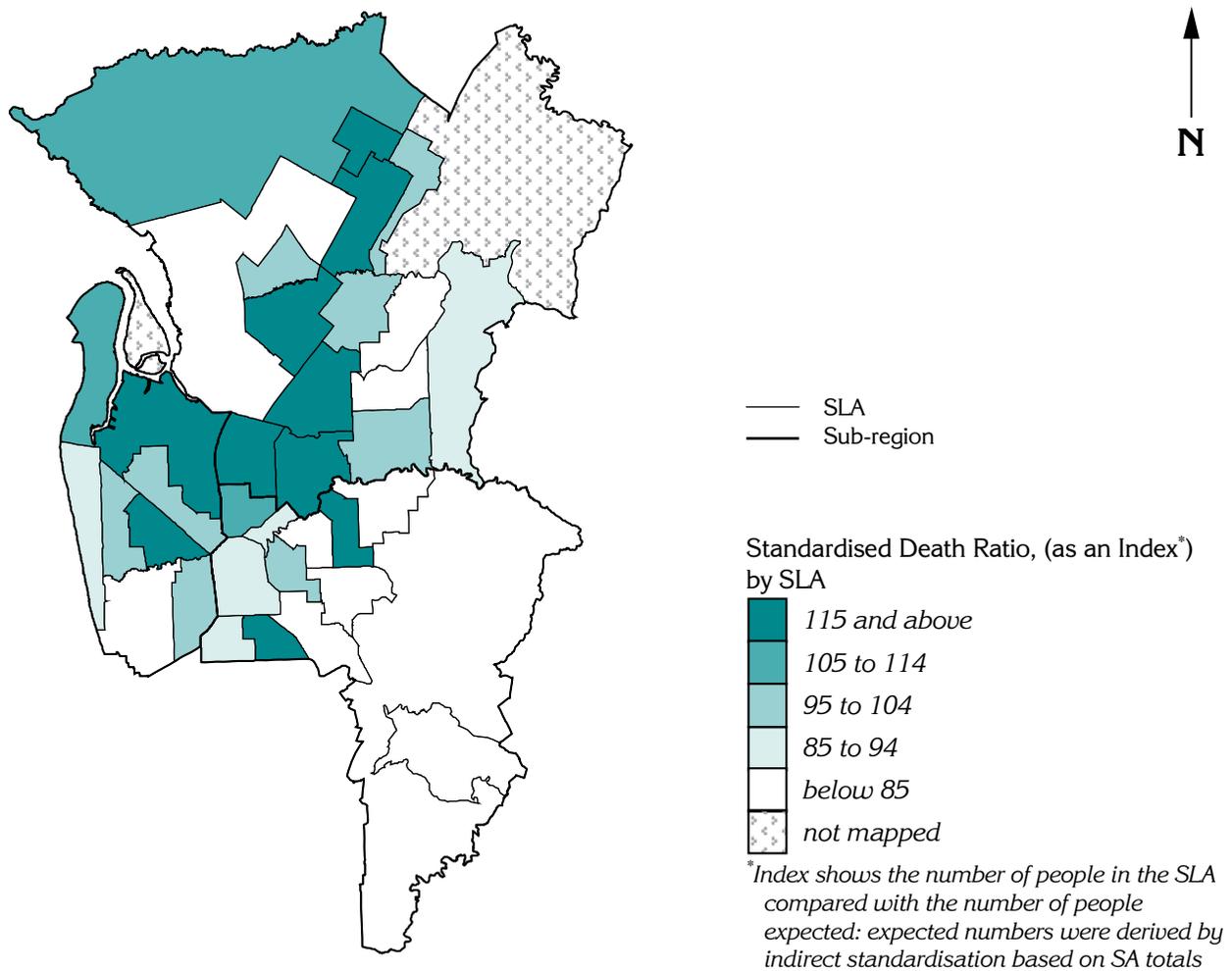


Table 63: Deaths of females aged 15 to 64 years, CNAHS, 1999 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	253	81**
Quintile 2	255	84**
Quintile 3	328	96
Quintile 4	324	113*
Quintile 5: most disadvantaged areas	381	123**
<b>Rate ratio</b>	<b>..</b>	<b>1.51**</b>
<b>Northern</b>	<b>704</b>	<b>107</b>
<b>Western</b>	<b>428</b>	<b>99</b>
<b>Central East</b>	<b>409</b>	<b>87**</b>
<b>CNAHS</b>	<b>1,541</b>	<b>99</b>
<b>Southern</b>	<b>586</b>	<b>89**</b>
<b>Metropolitan regions</b>	<b>2,137</b>	<b>96</b>
<b>State total</b>	<b>3,061</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Avoidable mortality

Mortality from avoidable causes at ages 0 to 74 years: data for 1999 to 2002

## Overview

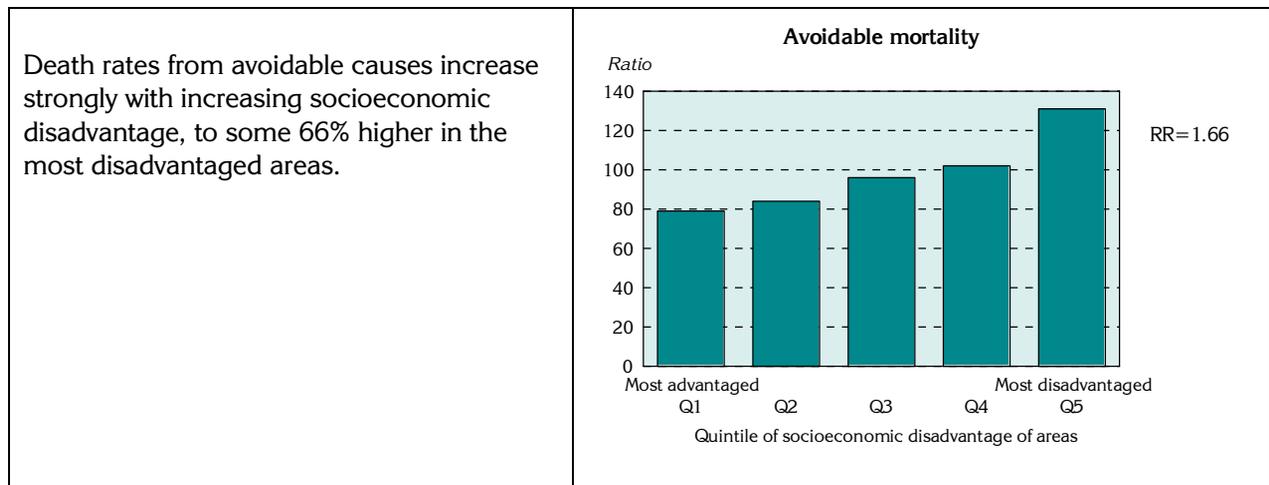
**One approach to assessing the quality of health care in terms of clinical outcomes has been to identify deaths that should not have occurred, given the availability of health care interventions. The largest contributors to these deaths are cancers and cardiovascular diseases (around one third each), unintentional and intentional injuries (15% each) and respiratory diseases (six per cent). Details of the conditions included are on the PHIDU website [www.publichealth.gov.au](http://www.publichealth.gov.au).**

Residents of Central Northern had 5,644 deaths from avoidable causes, one per cent fewer than expected from the State rates (Table 64). The pattern of standardised ratios (SRs) at the SLA level (Map 63) is consistent with the pattern of socioeconomic disadvantage seen in Map 23 (page 113).

A number of SLAs had highly elevated ratios, with the highest being in Playford - West Central, where there were 64% more avoidable deaths than expected (an SR of 164\*\*, 133 deaths). Playford - Elizabeth had 44% more avoidable deaths than expected (an SR of 144\*\*, 307 deaths), with other high ratios in Port Adelaide Enfield - Port (132\*\*, 275) and - Inner (130\*\*, 214); Charles Sturt - North-East (127\*\*, 250), Adelaide (122\*, 114), Salisbury - Central (121\*\*, 213), Salisbury Balance (121, 32) and Port Adelaide Enfield - Coast (120\*\*, 261).

There were large numbers of avoidable deaths in Salisbury - South-East (276 deaths, an SR of 114\*), Port Adelaide Enfield - East (247, 105), Tea Tree Gully - South (227, 92), Charles Sturt - Inner West (206, 92), Charles Sturt - Inner East (201, 104), West Torrens - East (195, 104), Campbelltown - West (171, 96).

A number of SLAs in Central Northern had fewer avoidable deaths than expected from the State rates. These included Playford Hills (an SR of 37\*\*, seven deaths), Adelaide Hills - Ranges (55\*\*, 37), Tea Tree Gully - Hills (61\*\*, 58), Burnside - North-East (65\*\*, 121), Walkerville (66\*\*, 42), Adelaide Hills - Central (67\*\*, 58), Tea Tree Gully - North (70\*\*, 97) and - Central (72\*\*, 128), West Torrens - West (78\*\*, 202), Unley - West (79\*\*, 93), Campbelltown - East (79\*\*, 169) and Charles Sturt - Coastal (79\*\*, 214).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 63: Avoidable mortality, CNAHS, 1999 to 2002

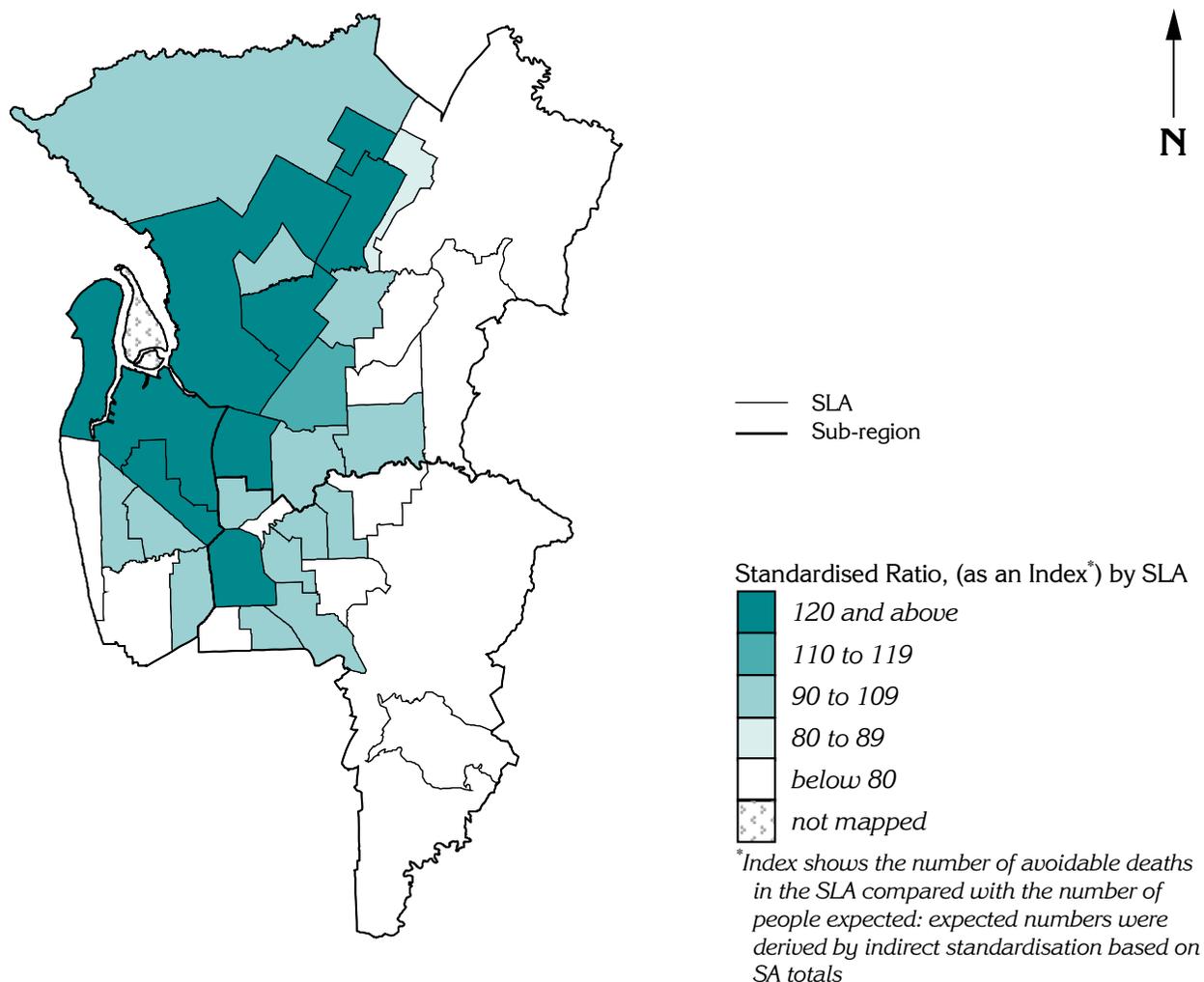


Table 64: Avoidable mortality, CNAHS, 1999 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	833	79**
Quintile 2	857	84**
Quintile 3	1,271	96
Quintile 4	1,129	102
Quintile 5: most disadvantaged areas	1,554	131**
<b>Rate ratio</b>		<b>1.66**</b>
<b>Northern</b>	<b>2,352</b>	<b>104*</b>
<b>Western</b>	<b>1,804</b>	<b>103</b>
<b>Central East</b>	<b>1,488</b>	<b>88**</b>
<b>CNAHS</b>	<b>5,644</b>	<b>99</b>
<b>Southern</b>	<b>2,088</b>	<b>86**</b>
<b>Metropolitan regions</b>	<b>7,765</b>	<b>96**</b>
<b>State total</b>	<b>11,345</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Health-Adjusted Life Expectancy: Males

*Number of years a newborn male can expect to live in good health, if current population trends of disease and disability persist: data for 1999 to 2002*

## Overview

***Health-adjusted life expectancy (HALE) is an indicator of the number of years a newborn can expect to live in good health, if current population trends of disease and disability persist. HALE is useful in making comparisons over time, as it takes into account changes in the extent of disability within the population*<sup>82</sup>.**

### Introduction

The burden of disease methods combine information on deaths and non-fatal (disease and injury) outcomes, to provide two broad summary measures of population health, namely health expectancies and health gaps (DH 2004). Health expectancies can be expressed as health adjusted life expectancy (HALE). This is calculated as the expected number of years to be lived in what might be termed the equivalent of 'full health' (Mathers et al. 2000).

Disability adjusted life years (DALYs) are the most frequently used measure for calculating health gaps. DALYs reflect life years lost from a range of diseases and injuries, using a range of assumptions about the severity and duration of mental or physical disability. DALYs comprise two components: Mortality is the amount of years of life lost (YLL) and morbidity is the amount of years lost to disability (YLD). Thus, one DALY represents one full year of healthy life lost from the disease and disability free ideal (DH 2005). The South Australian Burden of Disease Study applied these techniques to describe the average amount of ill health and premature death occurring in the South Australian population during the period 1999-2001. A selection of these data has been included in this section.

### Data limitations

The impact on local area rates of the location of special-purpose nursing homes and other types of supported accommodation<sup>3</sup> is of particular relevance for the burden of disease estimates, which are not limited by age.

This is no more evident than in the City of Unley. In Unley, the unexpectedly low estimates of Health-Adjusted Life Expectancy and relatively high rate of Years of Life Lost (see below) are likely to reflect the location of such facilities, in particular the Julia Farr Centre, which provides accommodation for people with a disability, including people with acquired brain injury, or a degenerative neurological or physical disorder: this increases the mortality rate.

### Areas mapped

The areas mapped for the estimates in this section, referred to as Burden of Disease areas, are groupings of SLAs as the number of cases at the SLA level is often too small to be reliable.

The HALE for males in Central Northern was 69.7 years, with a variation of 7.4 years between Burden of Disease areas within the region (Table 65). The SLAs with the lowest HALEs were located in the north-west and outer north (Map 64).

The Burden of Disease areas with the highest HALE scores in the region were in Tea Tree Gully - Central/ Hills/ North (73.1 years), Tea Tree Gully - South (71.7 years), Campbelltown (71.3 years) and Burnside (71.0 years).

Males in Playford - West Central/ Elizabeth had the lowest HALEs in the region being four years lower than the regional HALE (65.7 years). There were also low HALEs in Port Adelaide Enfield - Coast/ Port/ Unincorporated Western (66.9 years) and Port Adelaide Enfield - East/ Inner (67.1 years).

**Note: The data have not been shown by quintile of socioeconomic disadvantage of area as there were too few areas to allocate to the five groups.**

<sup>3</sup> For example, accommodation used by people with psychiatric conditions (hostels, boarding houses, shelters); community houses for those with an intellectual disability.

Map 64: Health-Adjusted Life Expectancy, males, CNAHS, 1999 to 2002

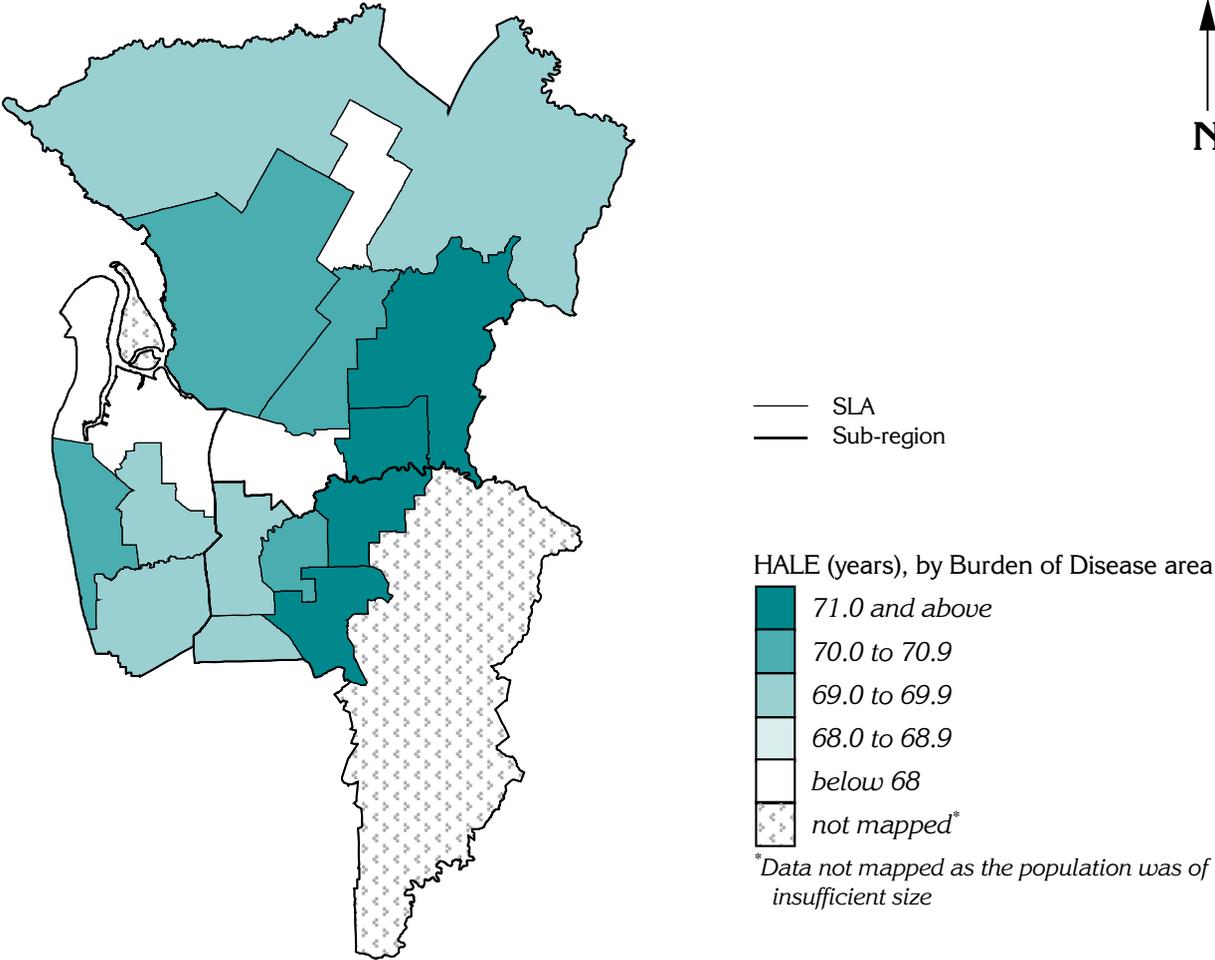


Table 65: Health-Adjusted Life Expectancy, males, CNAHS, 1999 to 2002

Area	HALE (years)
CNAHS	69.7
Southern	70.4
Metropolitan regions	69.9
State total	69.8

# Health-Adjusted Life Expectancy: Females

*Number of years a newborn female can expect to live in good health, if current population trends of disease and disability persist: data for 1999 to 2002*

## Overview

*Health-adjusted life expectancy (HALE) is an indicator of the number of years a newborn can expect to live in good health, if current population trends of disease and disability persist. HALE is useful in making comparisons over time, as it takes into account changes in the extent of disability within the population<sup>82</sup>.*

The notes on page 200 contain background information on the preparation of these estimates: readers should note in particular the notes as to the limitations of these area-level estimates.

Overall, HALE for Central Northern was 74.7 years (Table 66). The SLAs with the lowest HALEs were located in the north-west and outer north, and to the south, in Unley (see note on data limitations, page 202) (Map 65).

There was considerable variation in HALE between Burden of Disease areas in this region for females (as there was for males), with 6.5 years difference between the highest and lowest HALE calculations.

The highest HALE for females was calculated for the Tea Tree Gully - Central/ Hills/ North (78.2 years), followed by Burnside (77.2 years), West Torrens (76.8 years), the Playford SLAs of - East Central/ Hills/ West (76.1 years) and Campbelltown (76.1 years).

As was the case for males, the lowest HALEs in this region were for females living in Playford - West Central/ Elizabeth (71.7 years). Other low HALEs were found in Unley (72.2 years); Port Adelaide Enfield - East/ Inner (72.7 years); and Port Adelaide Enfield - Coast/ Port/ Unincorporated Western (73.2 years).

**Note: The data have not been shown by quintile of socioeconomic disadvantage of area as there were too few areas to allocate to the five groups.**

Map 65: Health-Adjusted Life Expectancy, females, CNAHS, 1999 to 2002

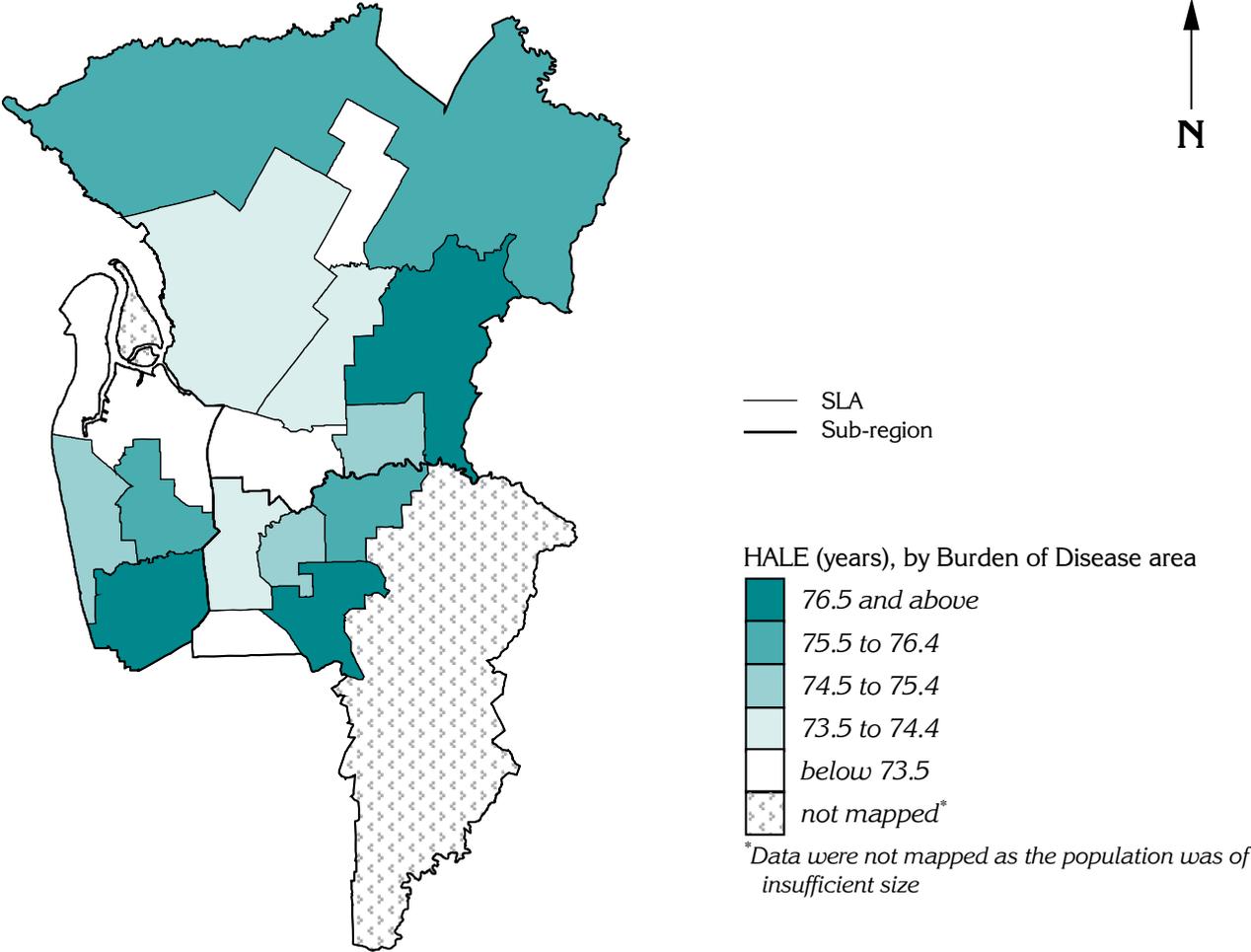


Table 66: Health-Adjusted Life Expectancy, females, CNAHS, 1999 to 2002

Area	HALE (years)
CNAHS	74.7
Southern	75.6
Metropolitan regions	75.0
State total	74.9

Source: Estimated from 2001 National Health Survey (NHS), ABS (unpublished)

## Years of Life Lost: 0 to 74 years

Number of years of life lost due to death before 75 years of age: data for 1999 to 2002

### Overview

*One measure of the impact of premature death is the number of potential years of life lost as a result of death before a certain age, in this case, 75 years. This measure is calculated as the sum of all the years of life that could potentially have been lived had people not died before the age of 75 years. The total number of years of life lost (YLL) is calculated by assuming that people who died at 17 years of age would have otherwise lived to the age of 75 years (i.e. 75 minus 17 years), and that 58 years of life are lost. In this analysis, deaths included were of people aged from 0 to 74 years. The rates per 100,000 population, age standardised to the South Australian population, are expressed as an index with a base of 100.*

The notes on page 200 contain background information on the preparation of these estimates: readers should note in particular the notes as to the limitations of these area-level estimates.

There were estimated to be 35,028 years of life lost for the population of the Central Northern region, this was the expected number of years for the population size and structure (with a standardised ratio (SR) of 100) (Table 67). The Burden of Disease areas with the most highly elevated ratios of years of life lost were located in the disadvantaged areas in the inner north, north-west and outer north (Map 66).

Playford - West Central/ Elizabeth had the most highly elevated ratio in the metropolitan regions with nearly 60% more years of life lost than expected (an SR of 157<sup>\*\*</sup>, 2,818 YLL). There were also highly elevated ratios in Port Adelaide Enfield - Coast/ Port/ Unincorporated Western (128<sup>\*\*</sup>, 3,280), Port Adelaide Enfield - East/ Inner (124<sup>\*\*</sup>, 2,912), Charles Sturt - Inner East/ North-East (110<sup>\*\*</sup>, 2,486) and Salisbury - Central/ Inner North/ Balance (109<sup>\*\*</sup>, 2,408).

There were also large numbers of years of life lost in Salisbury - North-East/ South-East (2,592 YLL, an SR of 101) and West Torrens (2,378, 91).

Tea Tree Gully - Central/ Hills/ North had the lowest ratio of all the Burden of Disease areas in South Australia, with 32% fewer years of life lost than expected (an SR of 68<sup>\*\*</sup>, 1,857 YLL). There were also lower than expected ratios in Burnside (an SR of 82<sup>\*\*</sup>, 1,695 YLL), Tea Tree Gully - South (85<sup>\*\*</sup>, 1,330), Charles Sturt - Coastal/ Inner West (86<sup>\*\*</sup>, 2,508), Campbelltown (88<sup>\*\*</sup>, 2,066) and Playford - East Central/ Hills/ West (89<sup>\*\*</sup>, 1,048).

**Note:** The data have not been shown by quintile of socioeconomic disadvantage of area as there were too few areas to allocate to the five groups.

Map 66: Years of Life Lost, 0 to 74 year olds, CNAHS, 1999 to 2002

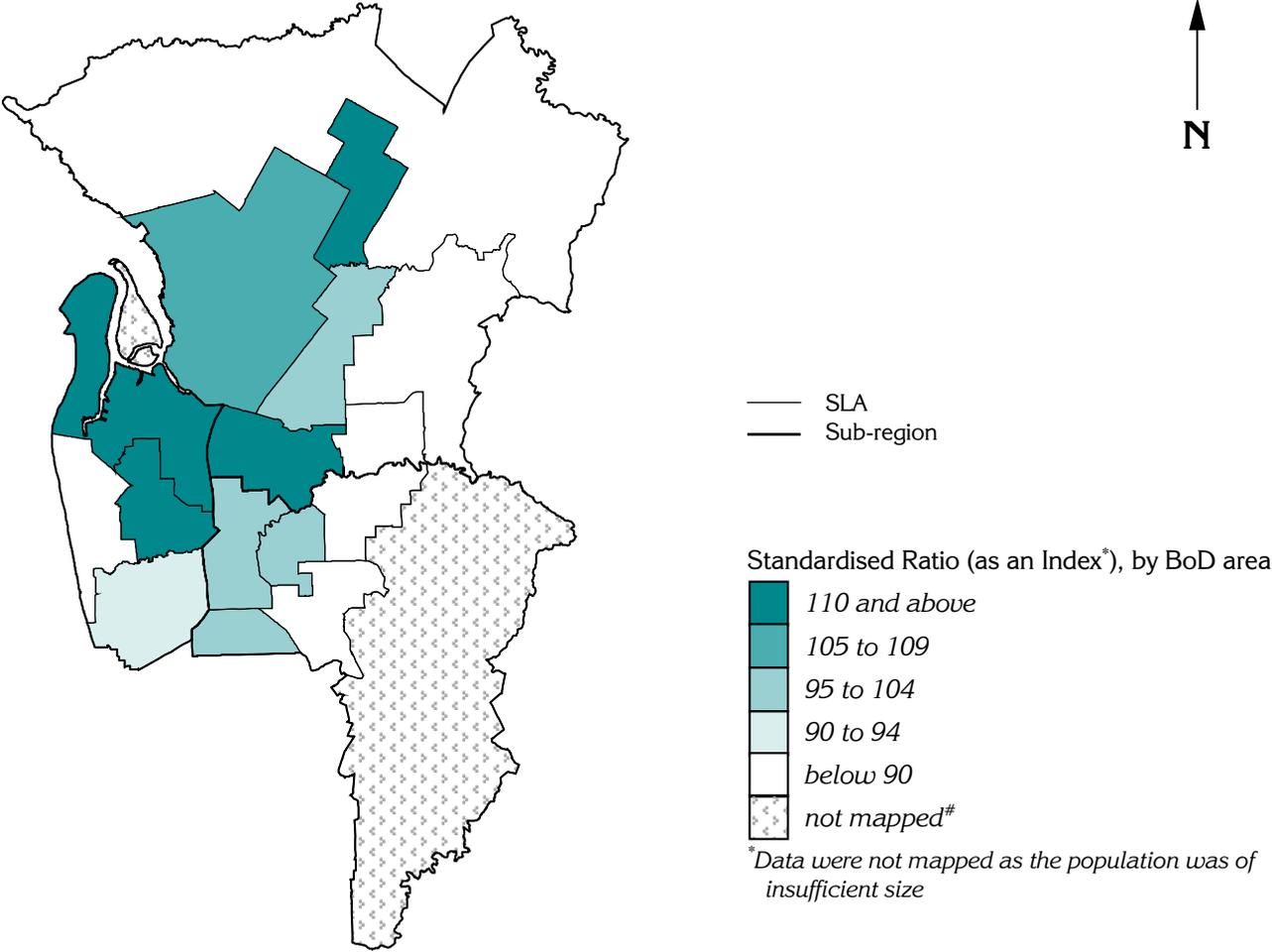


Table 67: Years of Life Lost, 0 to 74 year olds, CNAHS, 1999 to 2002

Area	Number	Standardised ratio
Northern	12,053	100
Western	15,139	106**
Central East	7,218	93**
CNAHS	35,028	100
Southern	13,300	89**
Metropolitan regions	48,328	97**
State total	69,898	100

\* indicates statistical significance: see page 19

## Years of Life Lost to Disability: 0 to 74 years

Number of years of life lost due to a disability: data for 1999 to 2002

### Overview

*The determination of years of life lost due to a disability are based on calculations of time lived in less than full health. The cause of the reduced level of health is used as a weighting so that, for example, poor health due to cancer contributes more to a year lost due to disability than does poor health due to a cold. The greatest proportion of years of life lost to disability (YLD) across all age groups in South Australia is due to mental disorders (26%). This is followed by nervous system and sense organ disorders (20%)<sup>46</sup>. The rates per 100,000 population, age standardised to the South Australian population, are expressed as an index with a base of 100.*

The notes on page 200 contain background information on the preparation of these estimates: readers should note in particular the notes as to the limitations of these area-level estimates.

It is estimated that 40,636 years of life were lost to disability for the population of the Central Northern region. This is the expected number of years based on the population size and structure (with a standardised ratio (SR) of 100) (Table 68). The BoD areas with the largest number of YLD were located in SLAs in the inner north, north-west and outer north of the region (Map 67).

Port Adelaide Enfield - East/ Inner had the most highly elevated ratio, with 25% more years of life lost to disability than expected from the State rates (an SR of 125<sup>\*\*</sup>, 3,196 YLD). There were also highly elevated rates in Playford - West Central/ Elizabeth (116<sup>\*\*</sup>, 2,406), and Port Adelaide Enfield – Coast/ Port/ Unincorporated Western (115<sup>\*\*</sup>, 3,323). Salisbury – Central/ Inner North/ Balance (105<sup>\*\*</sup>, 3,088), Salisbury - North-East/ South-East (105<sup>\*\*</sup>, 3,190), West Torrens (104<sup>\*</sup>, 2,941), Charles Sturt – Coastal/ Inner West (103, 3,174) and Charles Sturt - Inner East/ North-East (102, 2,551) all had slightly elevated ratios.

There were a large number of years of life lost to Disability in Tea tree Gully - Central, Hills, North (3,103 YLD, an SR of 90<sup>\*\*</sup>).

The lowest ratios, with fewer years lost to disability than expected from the State rates, were calculated for Tea Tree Gully - South (an SR of 82<sup>\*\*</sup>, 1,478 YLD), Norwood Payneham and St Peters (86<sup>\*\*</sup>, 1,539) and Burnside (87<sup>\*\*</sup>, 1,962).

**Note:** The data have not been shown by quintile of socioeconomic disadvantage of area as there were too few areas to allocate to the five groups.

Map 67: Years of Life Lost to Disability, 0 to 74 year olds, CNAHS, 1999 to 2002

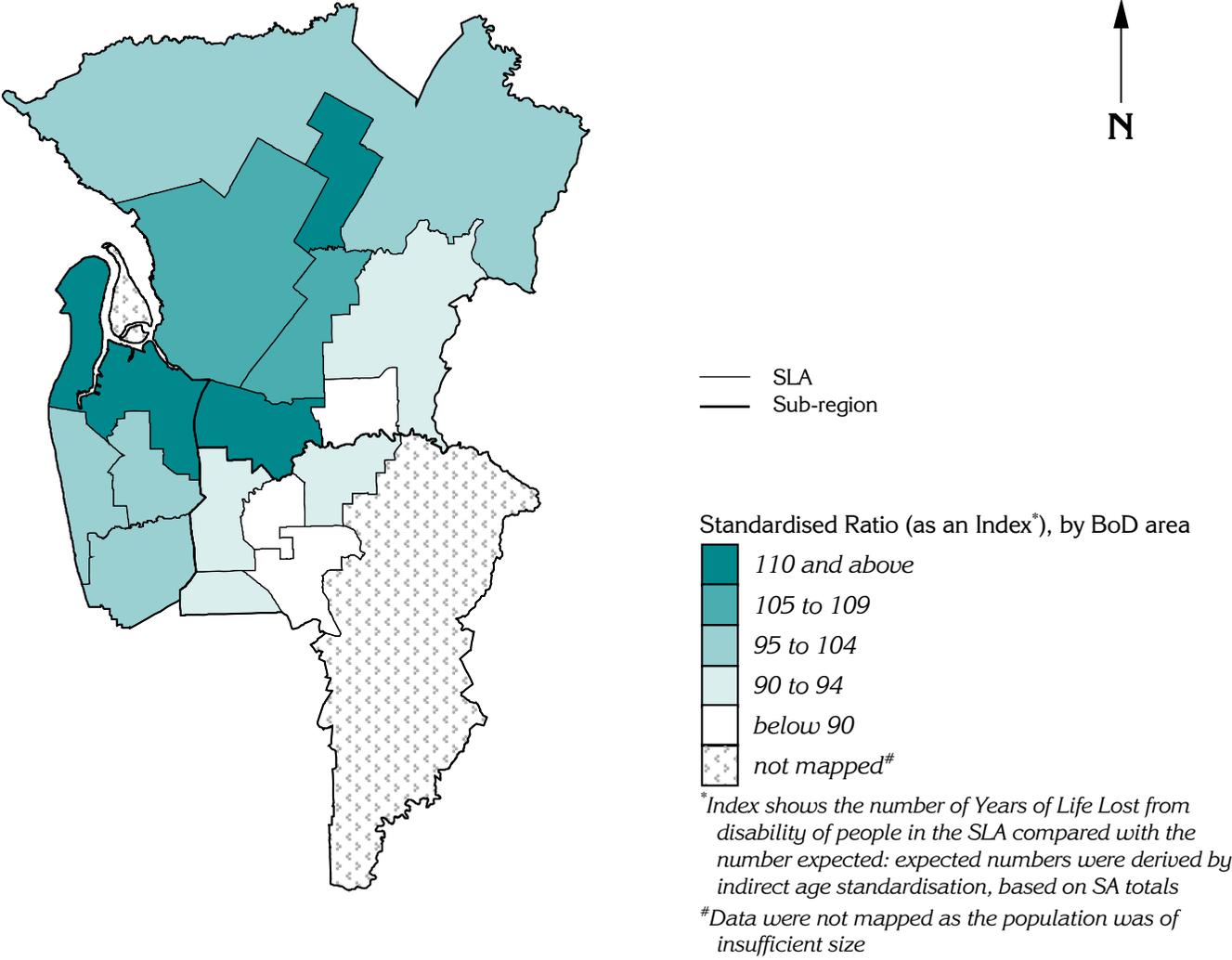


Table 68: Years of Life Lost to Disability, 0 to 74 year olds, CNAHS, 1999 to 2002

Area	Number	Standardised ratio
Northern	14,722	99
Western	16,725	107**
Central East	8,006	91**
CNAHS	40,636	100
Southern	16,444	96**
Metropolitan regions	57,080	99*
State total	80,201	100

\* indicates statistical significance: see page 19

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## INDICATORS: use of services

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# Community health services: one to one clients

Clients of a community health centre funded by the Department of Health SA, 2001/02

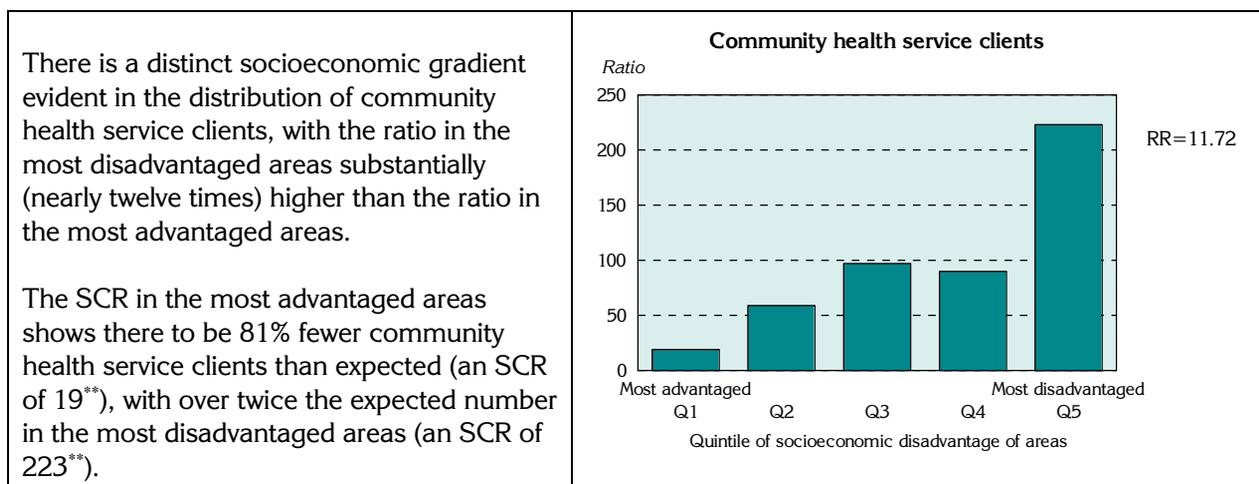
## Overview

**Community health services offer early intervention, prevention, treatment, and health promotion and education services. Only clients attending for sessions on a one-to-one basis are included (that is, the data exclude group sessions).**

There were 8,333 community health service clients who attended a community health centre or service in the Central Northern region in 2001/02, two per cent more than expected from the rates for the metropolitan regions (a standardised client ratio (SCR) of 102\*) (Table 69). There is a marked separation between areas with high, and those with low, number of clients of community health services (Map 68), with ratios ranging from 542\*\* in Port Adelaide Enfield - Port (1,480 clients) down to 5\*\* in Adelaide Hills - Central (six clients). This is due, in part, to the location and availability of these services, as well as to the limited ability of people in these areas to afford privately funded services of the kind offered at no cost through community health services.

Highly elevated ratios were recorded in a number of SLAs in the region. Charles Sturt - North-East (an SCR of 324\*, 902 clients) had over three times the expected number of community health clients; Charles Sturt - Inner East (118\*, 276) and - Inner West (112\*, 291) also had elevated SCRs. In addition to Port Adelaide Enfield - Port (with an SCR of 542\*\*), the SLAs of Port Adelaide Enfield - Coast (259\*\*, 782) and - Inner (150\*\*, 319) also had very highly elevated SCRs. The majority of Playford SLAs had highly elevated ratios, including Playford - Elizabeth (an SCR of 154\*\*, 42 clients), - West (148\*\*, 209), - East Central (131\*\*, 275) and - Hills (117, 35). Salisbury - Central (116\*\*, 345) and - Inner North (114\*, 310) also had elevated SCRs.

A large number of SLAs in Central Northern had very low SCRs with fewer community health service clients than expected. In addition to Adelaide (with an SCR of 5\*\*, six clients), these included Burnside - South-West (8\*\*, 17) and - North-East (12\*\*, 27), Adelaide Hills - Ranges (8\*\*, nine clients), Unley - East (13\*\*, 27), Walkerville (18\*\*, 13), Norwood Payneham and St Peters - West (20\*\*, 38) and - East (22\*\*, 39), Unley - West (25\*\*, 45), Campbelltown - East (26\*\*, 76) and - West (30\*\*, 62), Adelaide (46\*\*, 84), Tea Tree Gully - South (50\*\*, 175), - Hills (51\*\*, 67), - Central (53\*\*, 151) and - North (61\*\*, 171), Prospect (58\*\*, 120) and West Torrens - West (60\*\*, 179).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 68: Community health service clients (one-to-one), CNAHS, 2001/02

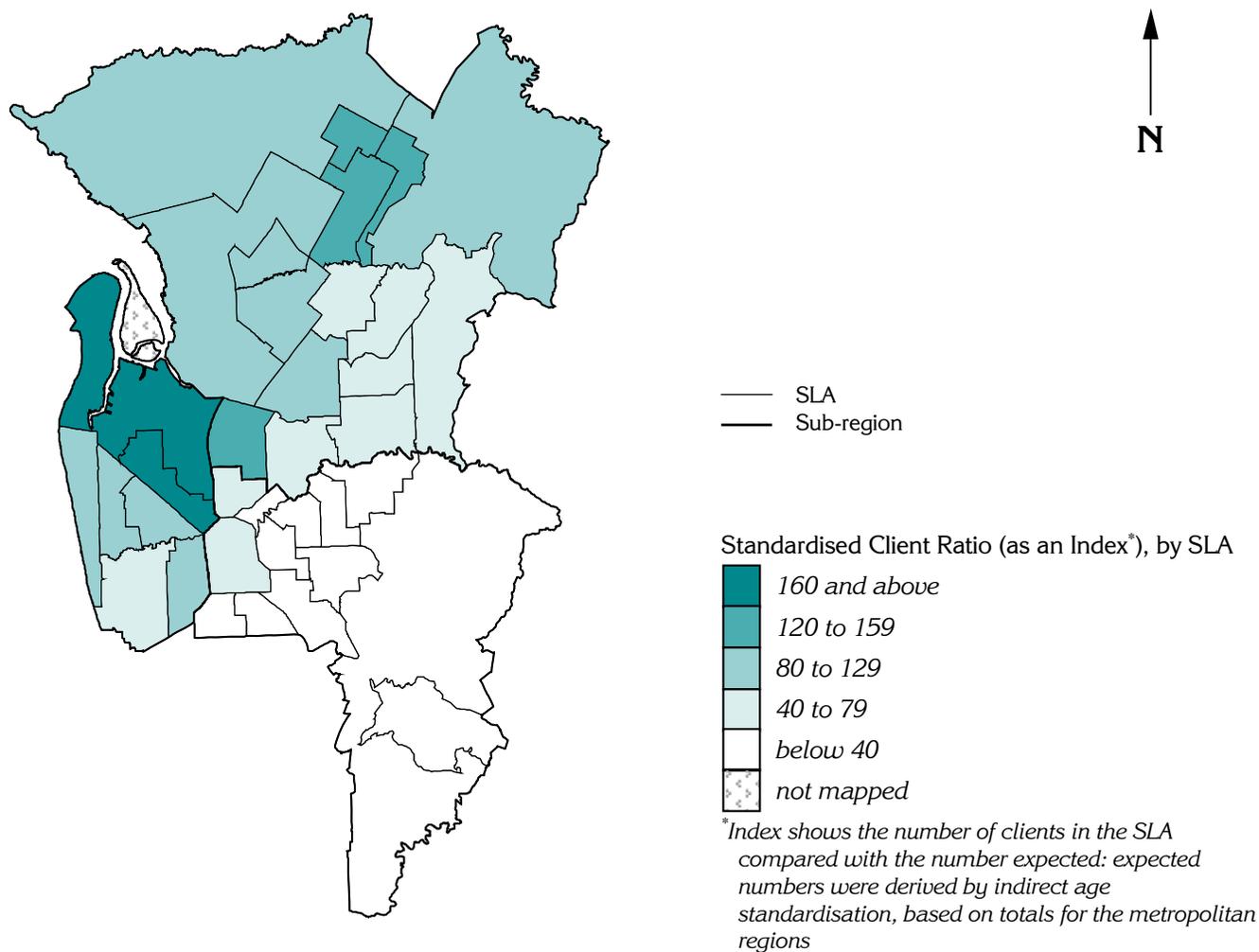


Table 69: Community health service clients (one-to-one), CNAHS, 2001/02

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	282	19**
Quintile 2	923	59**
Quintile 3	1,746	97
Quintile 4	1,330	90**
Quintile 5: most disadvantaged areas	4,053	223**
<b>Rate ratio</b>	<b>..</b>	<b>11.72**</b>
<b>Northern</b>	<b>3,307</b>	<b>94**</b>
<b>Western</b>	<b>4,465</b>	<b>200**</b>
<b>Central East</b>	<b>561</b>	<b>24**</b>
<b>CNAHS</b>	<b>8,333</b>	<b>102*</b>
<b>Southern</b>	<b>3,370</b>	<b>99</b>
<b>Metropolitan regions</b>	<b>11,703</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Community mental health services: one to one clients

Clients of a community mental health centre funded by the Department of Health SA, 1999/2000

## Overview

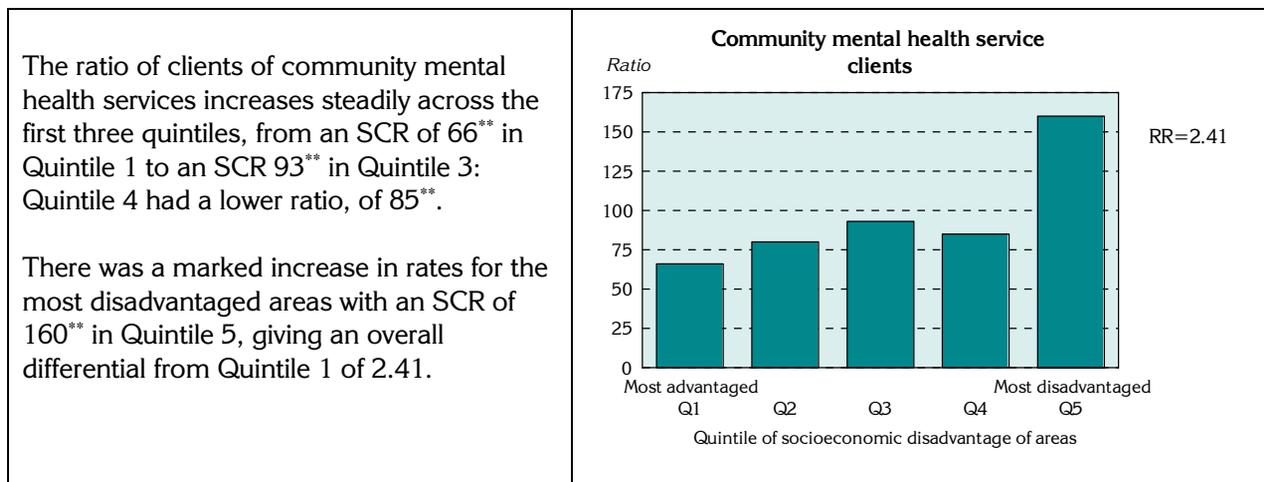
**Mental Health Community Services offer a wide range of assistance and programmes, ranging from acute crisis intervention and assessment, formal case management, rehabilitation and recovery programmes and peer / carer support networks.**

There were two per cent fewer community mental health service clients than expected in Central Northern (a standardised client ratio (SCR) of 98, with 6,823 clients) (Table 70). As noted for community health services (above), there is again a marked separation between areas with high, and those with low, numbers of community mental health service clients (Map 69).

There was wide variation in the number of clients between SLAs, with nearly two and a half times more clients than expected in Playford - Elizabeth (an SCR of 244\*\*, 528 clients), but just over quarter the number expected in Adelaide Hills - Central (27\*\*, 29). There were high rates and large numbers of clients in Port Adelaide Enfield - Inner (199\*\*, 368), Playford - West Central (174\*\*, 181), Adelaide (159\*\*, 236), Port Adelaide Enfield - Coast (144\*\*, 362), Charles Sturt - North-East (143\*\*, 346), Port Adelaide Enfield - Port (143\*\*, 340), Salisbury - Central (142\*\*, 341), Campbelltown - West (120\*\*, 215), Charles Sturt - Inner East (119\*\*, 240), Norwood Payneham and St Peters - West (119\*, 217) and Salisbury - Inner North (112, 234).

There were also relatively large numbers of clients, but lower ratios, in the SLAs of Charles Sturt - Coastal (306 clients, an SCR of 105), Port Adelaide Enfield - East (267, 103), West Torrens - West (225, 84\*\*) and Salisbury - South-East (215, 72\*\*).

Several SLAs had at least 40% fewer clients of community mental health services than expected from the State rates: these were Adelaide Hills - Central (an SCR of 27\*\*, 29 clients), Tea Tree Gully - Hills (31\*\*, 35), Adelaide Hills - Ranges (39\*\*, 34), Tea Tree Gully - Central (42\*\*, 100), Burnside - North-East (44\*\*, 86), Burnside - South-West (50\*\*, 92), Tea Tree Gully - South (50\*\*, 150), Charles Sturt - Inner West (52\*\*, 119), Campbelltown - East (53\*\*, 132), Tea Tree Gully - North (59\*\*, 133) and Playford - West (60\*\*, 41).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 69: Community mental health service clients (one-to-one), CNAHS, 1999/00

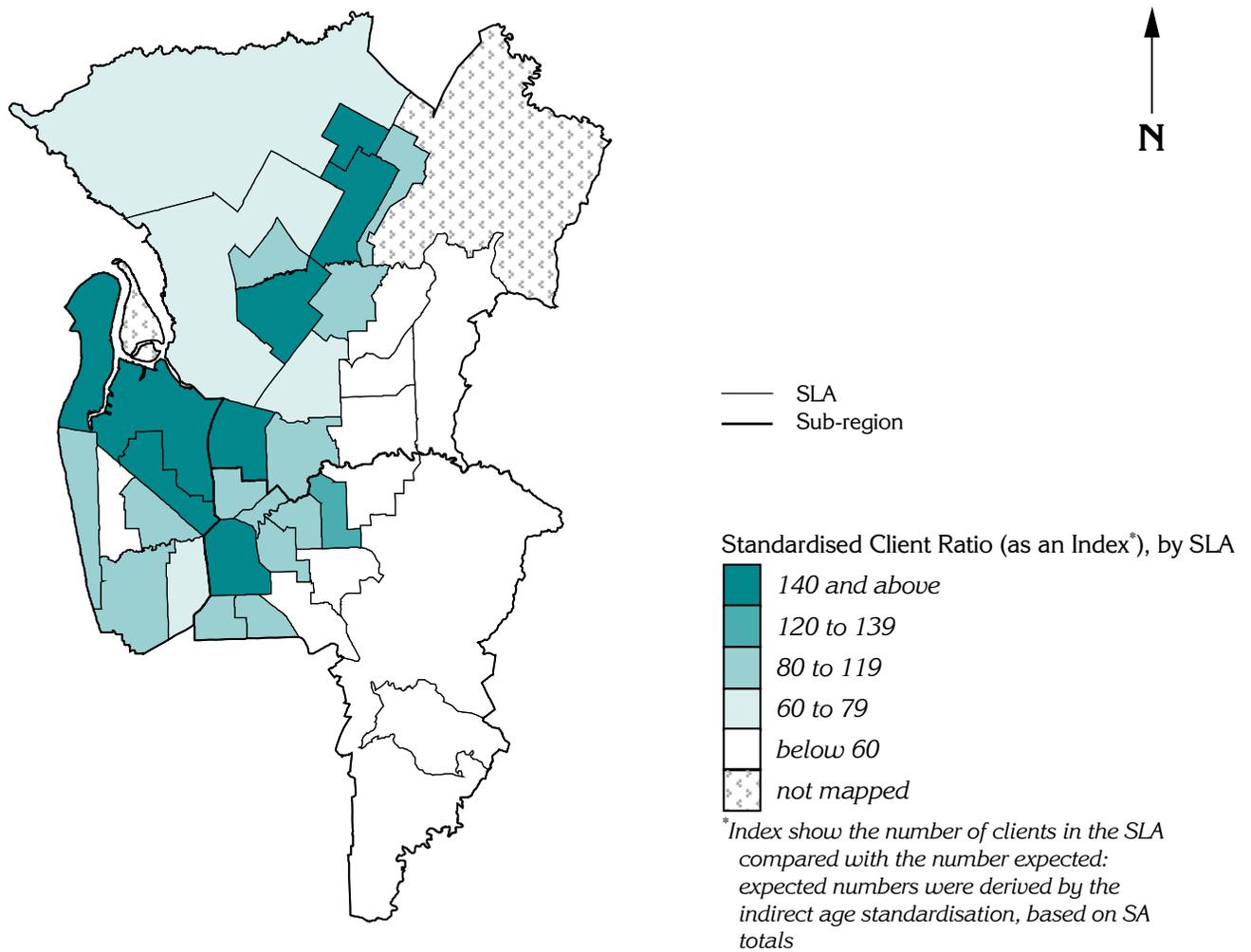


Table 70: Community mental health service clients (one-to-one), CNAHS, 1999/00

Area	Number of clients	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	879	66**
Quintile 2	1,068	80**
Quintile 3	1,442	93**
Quintile 4	1,064	85**
Quintile 5: most disadvantaged areas	2,370	160**
<b>Rate ratio</b>	<b>..</b>	<b>2.41**</b>
<b>Northern</b>	<b>2,947</b>	<b>103**</b>
<b>Western</b>	<b>2,127</b>	<b>108**</b>
<b>Central East</b>	<b>1,749</b>	<b>83**</b>
<b>CNAHS</b>	<b>6,823</b>	<b>98</b>
<b>Southern</b>	<b>2,681</b>	<b>94**</b>
<b>Metropolitan regions</b>	<b>9,504</b>	<b>97**</b>
<b>State total</b>	<b>13,419</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Child and Adolescent Mental Health Service: one to one clients

Clients of the Child and Adolescent Mental Health Service: data from 2001 to 2003

## Overview

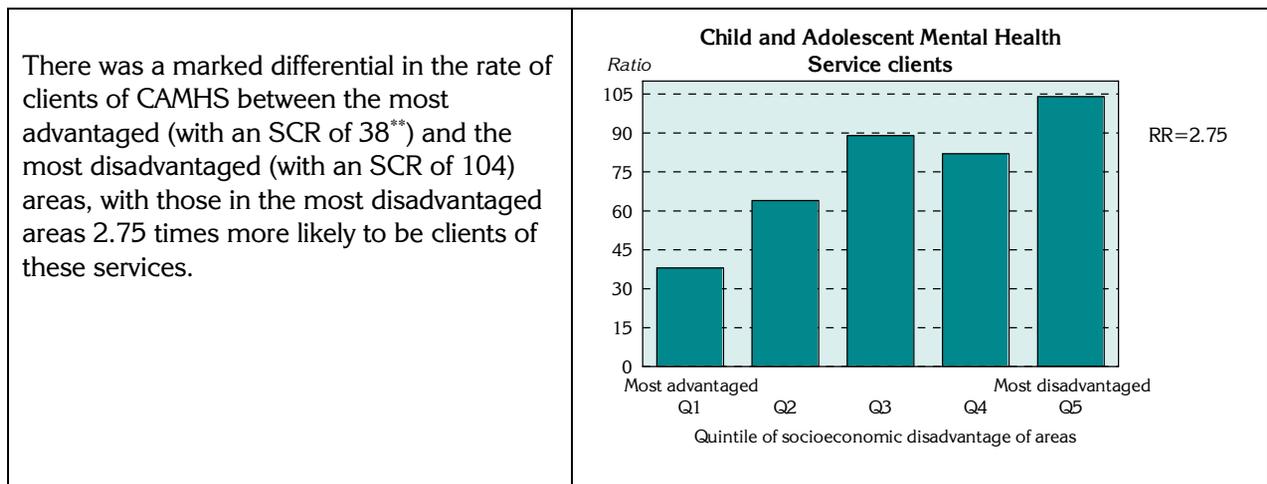
**The Child and Adolescent Mental Health Service (CAMHS) provides a confidential counselling service for children and young people and their families. Services are provided by child and family specialists including psychologists, psychiatrists, social workers, nurses, occupational therapists and speech pathologists who are experienced in helping children with emotional, behavioural or mental health difficulties**

There were 22% fewer CAMHS clients than expected in Central Northern (a standardised client ratio (SCR) of 78\*\*, 4,866 clients) (Table 71). As noted for other community-based services, there is a marked separation between areas with high, and those with low, numbers of CAMHS clients (Map 70).

The SLAs in this region with elevated ratios included Port Adelaide Enfield - Coast (an SCR of 160\*\*, 368 clients), Port Adelaide Enfield - Port (138\*\*, 281), Playford - Elizabeth (132\*\*, 322) and Port Adelaide Enfield - Inner (123\*\*, 179).

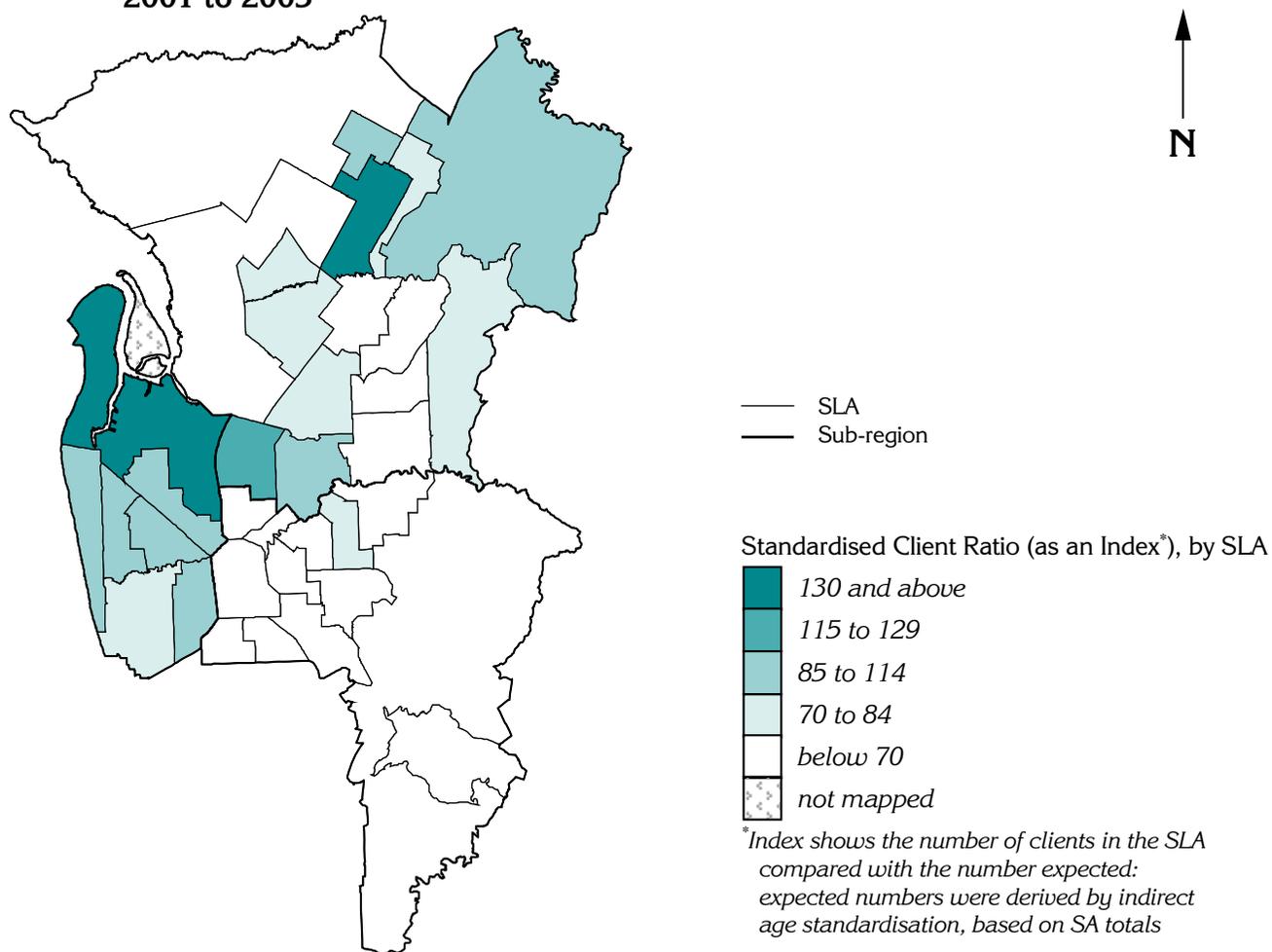
There were large numbers of clients, but low ratios, in Salisbury - South-East (230 clients, an SCR of 78\*\*), - Central (222, 81\*\*), - Inner North (213, 76\*\*) and Charles Sturt - Coastal (189, 88).

A large number of SLAs in Central Northern had low rates of CAMHS clients, including Walkerville (an SCR of 10\*\*, five clients), Burnside - South-West (21\*\*, 35), Unley - East (25\*\*, 34), Burnside - North-East (30\*\*, 51), Norwood Payneham and St Peters - West (31\*\*, 36), Adelaide (34\*\*, 20), Unley - West (37\*\*, 43), Adelaide Hills - Central (48\*\*, 60).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

**Map 70: Child and Adolescent Mental Health Service clients (one-to-one), CNAHS, 2001 to 2003**



**Table 71: Child and Adolescent Mental Health Service clients (one-to-one), CNAHS, 2001 to 2003**

Area	Number of clients	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	425	38**
Quintile 2	755	64**
Quintile 3	1141	89**
Quintile 4	921	82**
Quintile 5: most disadvantaged areas	1625	104
<b>Rate ratio</b>	<b>..</b>	<b>2.75**</b>
<b>Northern</b>	<b>2,498</b>	<b>81**</b>
<b>Western</b>	<b>1,664</b>	<b>110**</b>
<b>Central East</b>	<b>703</b>	<b>43**</b>
<b>CNAHS</b>	<b>4,866</b>	<b>78**</b>
<b>Southern</b>	<b>2,623</b>	<b>93**</b>
<b>Metropolitan regions</b>	<b>7,489</b>	<b>83**</b>
<b>State total</b>	<b>13,013</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Department for Families and Communities: clients

Clients of the Department for Families and Communities: data from 2001 to 2002

## Overview

*The Department for Families and Communities (DFC) offers a range of services to people in the community, including emergency financial assistance, individual and family support, counselling (e.g. personal, financial), crisis care (including after hours care) and child protection.*

Despite having a low overall standardised client ratio (SCR) of 94\*\* (28,615 clients) (Table 72), there was considerable variation in the region, with the number of clients ranging from over three times, to fewer than one fifth, the number expected from the State rates. SLAs with highly elevated ratios were located in parts of the inner north, north-west and outer north, and in the city of Adelaide (Map 71): SLAs with more clients than expected are some of the most disadvantaged in the region (see Map 23, page 113). The elevated SCR for the SLA of Adelaide is likely, in part, to reflect the allocation of Adelaide as the usual address for clients who live in supported accommodation in the city, or who are homeless.

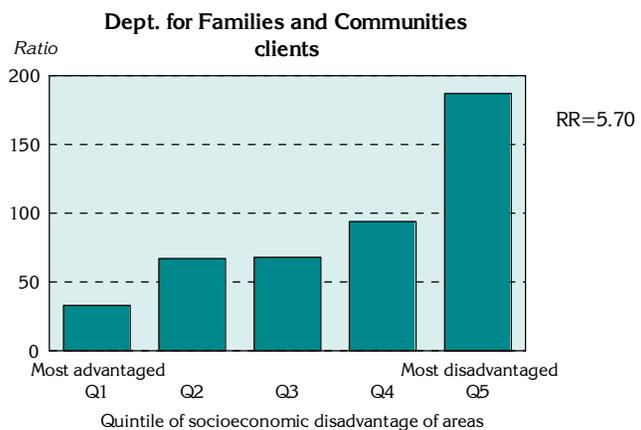
The SLA with the most highly elevated ratio (more than three times the expected number of clients) was Playford - West Central (an SCR of 315\*\*, 1,946 clients), with the SCR in - Elizabeth similarly highly elevated (290\*\*, 3,106). More than twice the expected number of clients were recorded for the SLAs of Adelaide (268\*\*, 1,334), Port Adelaide Enfield - Inner (215\*\*, 1,600) and - Port (203\*\*, 2,020). Elevated SCRs were also mapped in Salisbury - Central (137\*\*, 1,665) and - Inner North (130\*\*, 1,578), Charles Sturt - North-East (125\*\*, 1,261) and Port Adelaide Enfield - East (112\*\*, 1,207).

Large numbers of clients were also recorded for the SLAs of Salisbury - South-East (1,305 clients, an SCR of 93\*), Port Adelaide Enfield - Coast (1,064, 98) and Salisbury - North-East (908, 94).

A majority of the SLAs in this region had extremely low ratios. Those that had less than half the expected number of clients include Burnside - North-East (an SCR of 19\*\*, 143 clients) and - South-West (29\*\*, 218), Adelaide Hills - Central (25\*\*, 134) and - Ranges (26\*\*, 111), Unley - West (29\*\*, 190), Playford - Hills (30\*\*, 38), Campbelltown - East (31\*\*, 336), Tea Tree Gully - Hills (32\*\*, 157), Walkerville (38\*\*, 93), Unley - East (39\*\*, 284), Tea Tree Gully - Central (48\*\*, 553) and - North (49\*\*, 604).

There is a very strong relationship between using the services of DFC and socioeconomic disadvantage, with clients in the most disadvantaged areas being nearly six times (a rate ratio of 5.70\*\*) as likely to access these services as those in the most advantaged areas.

The SCR in the most advantaged areas shows there to be 67% fewer DFC clients than expected (an SCR of 33\*\*), with almost twice the expected number in the most disadvantaged areas (an SCR of 187\*\*).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 71: Department for Families and Communities' clients, CNAHS, 2001 to 2002

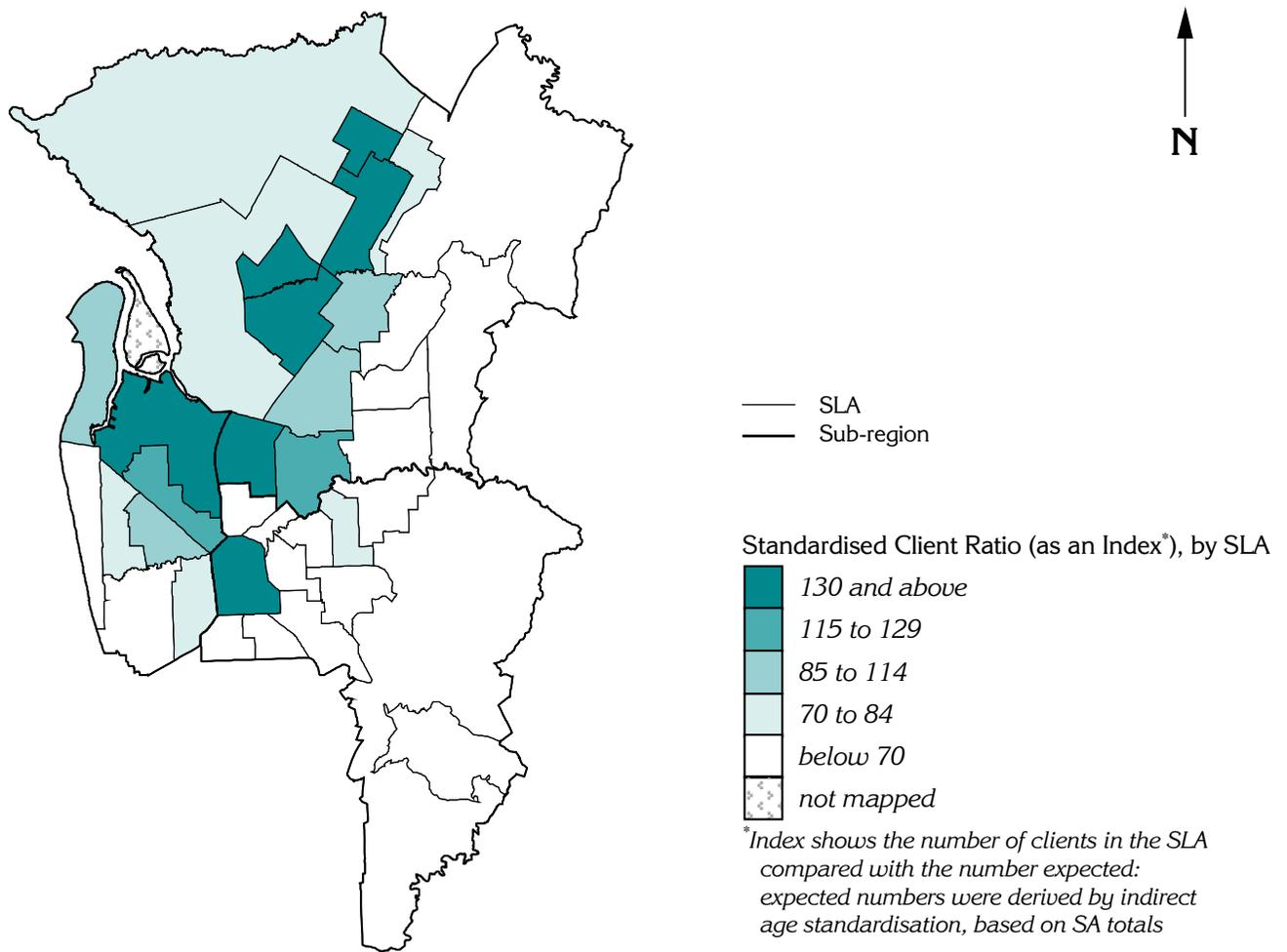


Table 72: Department for Families and Communities' clients, CNAHS, 2001 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1,771	33**
Quintile 2	3,884	67**
Quintile 3	4,404	68**
Quintile 4	5,167	94**
Quintile 5: most disadvantaged areas	13,389	187**
<b>Rate ratio</b>	<b>..</b>	<b>5.70**</b>
<b>Northern</b>	<b>16,552</b>	<b>117**</b>
<b>Western</b>	<b>7,623</b>	<b>98</b>
<b>Central East</b>	<b>4,440</b>	<b>53**</b>
<b>CNAHS</b>	<b>28,615</b>	<b>94**</b>
<b>Southern</b>	<b>9,363</b>	<b>73**</b>
<b>Metropolitan regions</b>	<b>37,978</b>	<b>88**</b>
<b>State total</b>	<b>60,158</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Domiciliary care service: clients

Number of clients in 2003

## Overview

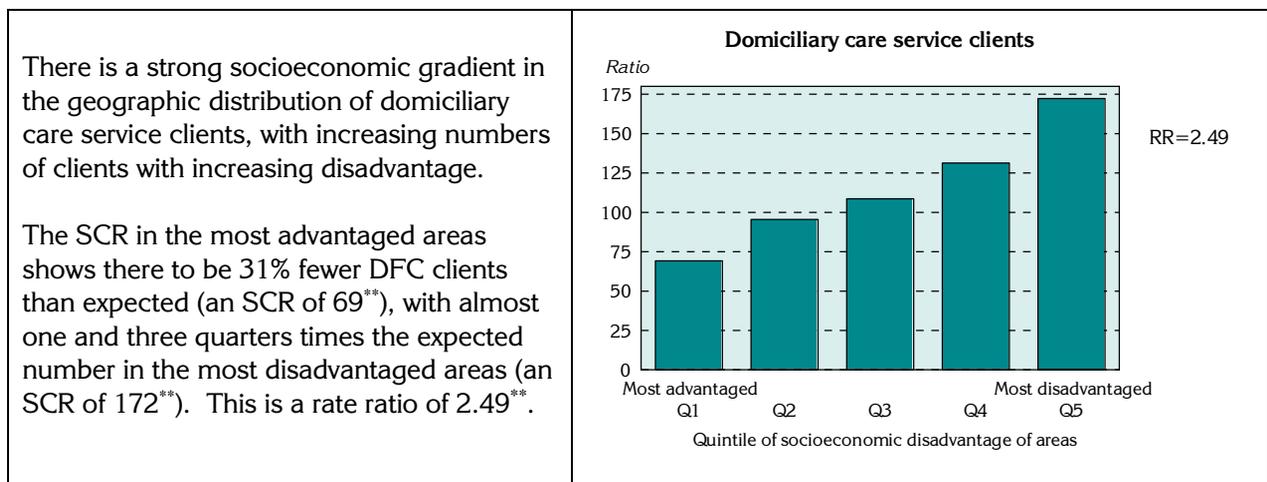
**Domiciliary care service clients receive a range of support services which are either centre-based (e.g. podiatry) or are provided in the home, and without which clients are at risk of institutionalisation.**

There were 15% more clients than expected in Central Northern (a standardised client ratio (SCR) of 115\*\*, 7,521 clients) (Table 73). The geographic distribution of clients (Map 72) shows a strong divide between areas with larger than expected numbers of clients and those with fewer than expected numbers, and is highly consistent with the pattern of socioeconomic disadvantage shown in Map 23 on page 113.

SLAs with the most highly elevated ratios, with more than twice the expected number of clients, were Playford - West Central (an SCR of 237\*\*, 138 clients) and Playford - Elizabeth (231\*\*, 534). There were also highly elevated ratios in Port Adelaide Enfield - Port (an SCR of 172\*\*, 426 clients), Port Adelaide Enfield - Inner (164\*\*, 370), Salisbury - Inner North (155\*\*, 137), Playford - West (149\*\*, 64), Port Adelaide Enfield - East (148\*\*, 387), Salisbury - Central (144\*\*, 256), Charles Sturt - North-East (143\*\*, 358), Prospect (141\*\*, 234), Salisbury - North-East (133\*\*, 169), Campbelltown - West (129\*\*, 305), Charles Sturt - Inner East (125\*\*, 305), Charles Sturt - Inner West (125\*\*, 328), Salisbury - South-East (121\*\*, 262), Port Adelaide Enfield - Coast (119\*\*, 299) and Norwood Payneham and St Peters - East (115\*\*, 254).

There were also large numbers of clients, but lower ratios, in West Torrens - West (328 clients, an SCR of 89\*), Tea Tree Gully - South (287, 107), Charles Sturt - Coastal (244, 71\*\*), West Torrens - East (238, 102) and Campbelltown - East (231, 104).

A number of SLAs had low SCRs: Adelaide Hills - Ranges (an SCR of 23\*\*, 13 clients), Unley - East (62\*\*, 136), Burnside - South-West (69\*\*, 176), Charles Sturt - Coastal (71\*\*, 244), Unley - West (77\*\*, 120), Walkerville (78\*, 68), Adelaide (78\*, 90), Burnside - North-East (80\*\*, 197) and Tea Tree Gully - Hills (82, 59).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 72: Domiciliary care service clients, CNAHS, 2003

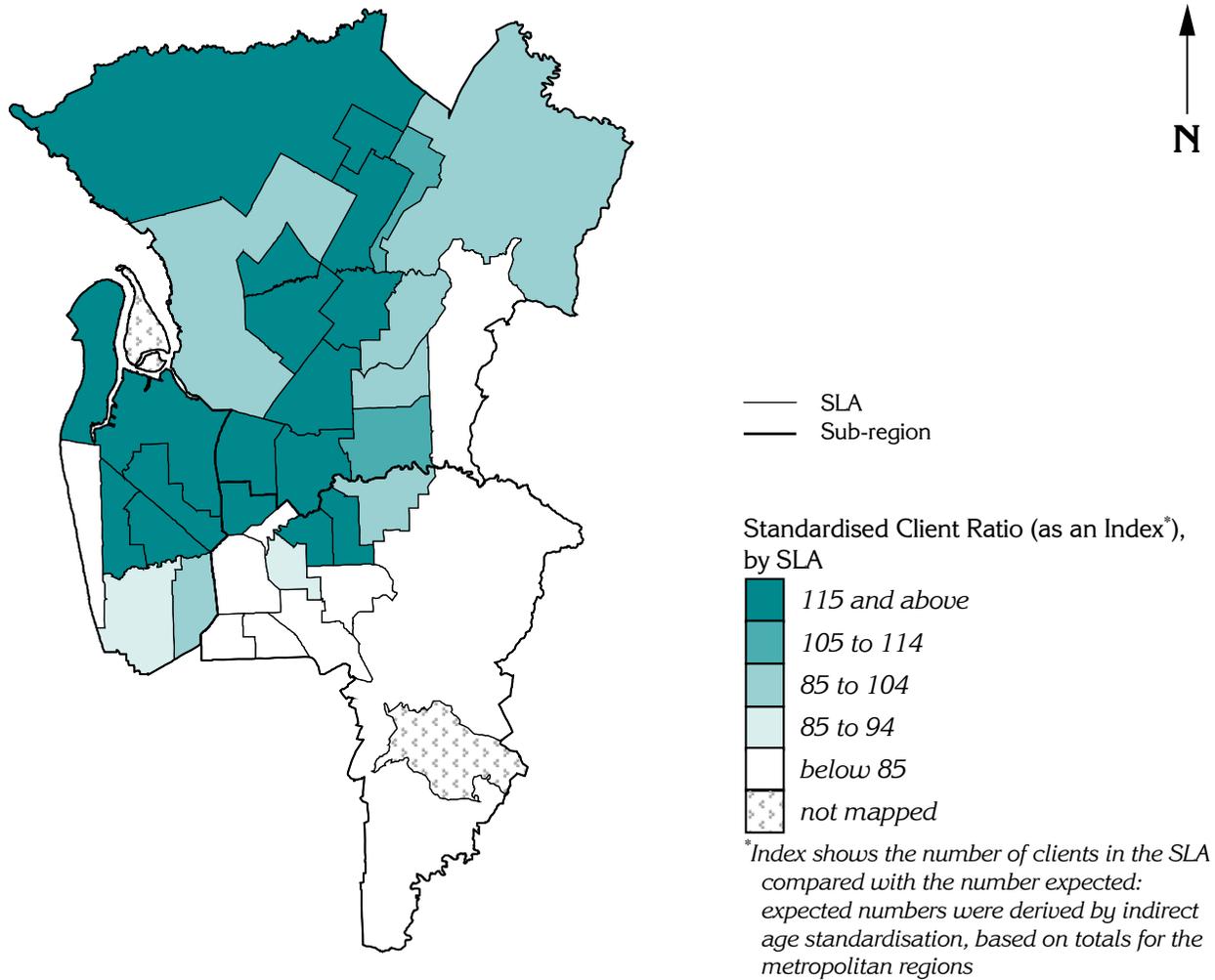


Table 73: Domiciliary care service clients, CNAHS, 2003

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	940	69**
Quintile 2	1,041	96
Quintile 3	1,798	109**
Quintile 4	1,503	131**
Quintile 5: most disadvantaged areas	2,239	172**
<b>Rate ratio</b>	..	<b>2.49**</b>
<b>Northern</b>	<b>3,024</b>	<b>142**</b>
<b>Western</b>	<b>2,514</b>	<b>115**</b>
<b>Central East</b>	<b>1,983</b>	<b>89**</b>
<b>CNAHS</b>	<b>7,521</b>	<b>115**</b>
<b>Southern</b>	<b>2,127</b>	<b>72**</b>
<b>Metropolitan regions</b>	<b>9,661</b>	<b>100</b>
<b>State total</b>	..	..

\* indicates statistical significance: see page 19

# Home nursing: Royal District Nursing Service clients

Number of clients in 2003/04

## Overview

*The Royal District Nursing Service provides nursing care at home or in a nursing centre. Services focus on the needs of older persons who are frail or who have a chronic or degenerative illness and need nursing care to remain in the community; people of any age who need care immediately following their discharge from hospital, or need palliative care; people of any age who have a disability and who need nursing assistance to manage their health care needs; and people aged under 65 years with a degenerative or chronic condition and who with nursing care are able to remain in the community.*

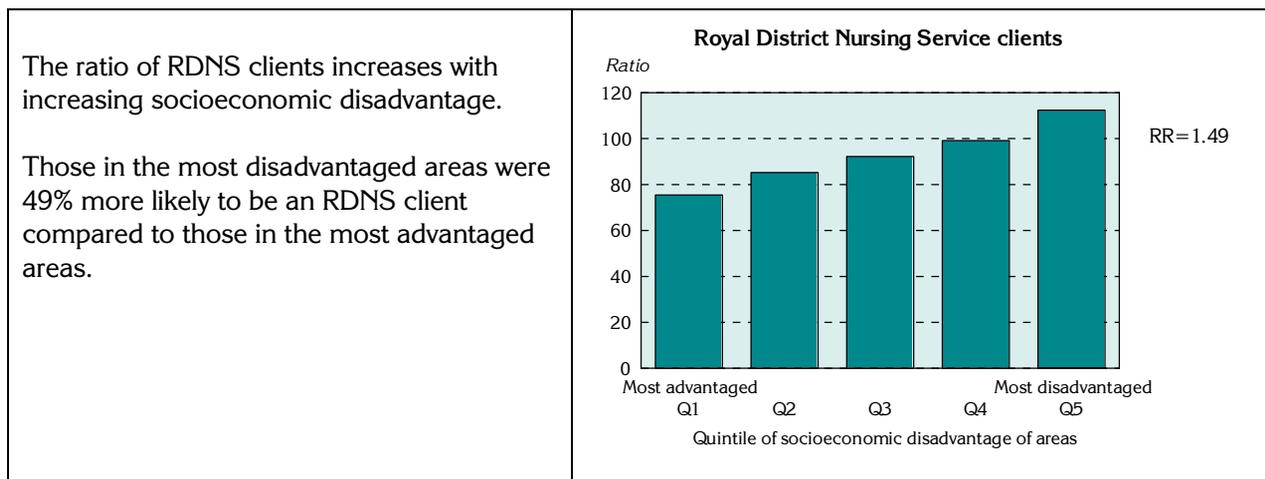
Data were not mapped for the SLA of Adelaide, because clients who contact Healthcare Access (the RDNS call centre) can choose to remain anonymous, resulting in their suburb being recorded as Adelaide. Further, all homeless clients seen by RDNS are allocated to the SLA of Adelaide. There were 901 RDNS clients attributed to the SLA of Adelaide (a standardised client ratio (SCR) of 510\*\*).

Excluding the large number of clients recorded for Adelaide, there were seven per cent fewer clients in the Central Northern region than expected from the metropolitan rates (an SCR of 93\*\*, 8,867 clients) (Table 74): this is ratio understates the true situation, as it excludes clients who live in the SLA of Adelaide, whether housed or homeless. The most highly elevated SCRs were in the northern and western SLAs, with relatively low ratios to the east, south and outer south-east and north-east of the city (Map 73).

The SLA with the most highly elevated ratio (other than Adelaide) was Salisbury - Inner North (an SCR of 133\*\*, 226), with elevated ratios also in Playford - West Central (an SCR of 128\*\*, 127 clients), Port Adelaide Enfield - Coast (127\*\*, 472), - Port (127\*\*, 450) and - Inner (118\*\*, 368), Playford - Elizabeth (114\*\*, 374), Charles Sturt - Inner West (113\*\*, 417) and - Inner East (106, 350), West Torrens - East (105, 356) and Charles Sturt - North-East (105, 382).

There were large numbers of RDNS clients, but lower ratios, in Charles Sturt - Coastal (443 clients, an SCR of 92), West Torrens - West (438, 87\*\*), Port Adelaide Enfield - East (358, 94), Burnside - South-West (339, 95), Tea Tree Gully - South (306, 76\*\*) and Salisbury - South-East (302, 87\*\*).

There were low ratios in a number of SLAs, including Adelaide Hills - Central (an SCR of 4\*\*, six clients) and - Ranges (36\*\*, 33), Tea Tree Gully - Hills (55\*\*, 65), Walkerville (71\*\*, 87), Tea Tree Gully - North (72\*\*, 136), Unley - East (73\*\*, 229), Campbelltown - West (73\*\*, 239), Burnside - North-East (76\*\*, 265), Tea Tree Gully - South (76\*\*, 306) and - Central (77\*\*, 188) and Playford - Hills (79, 18).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 73: Royal District Nursing Service clients, CNAHS, 2003/04

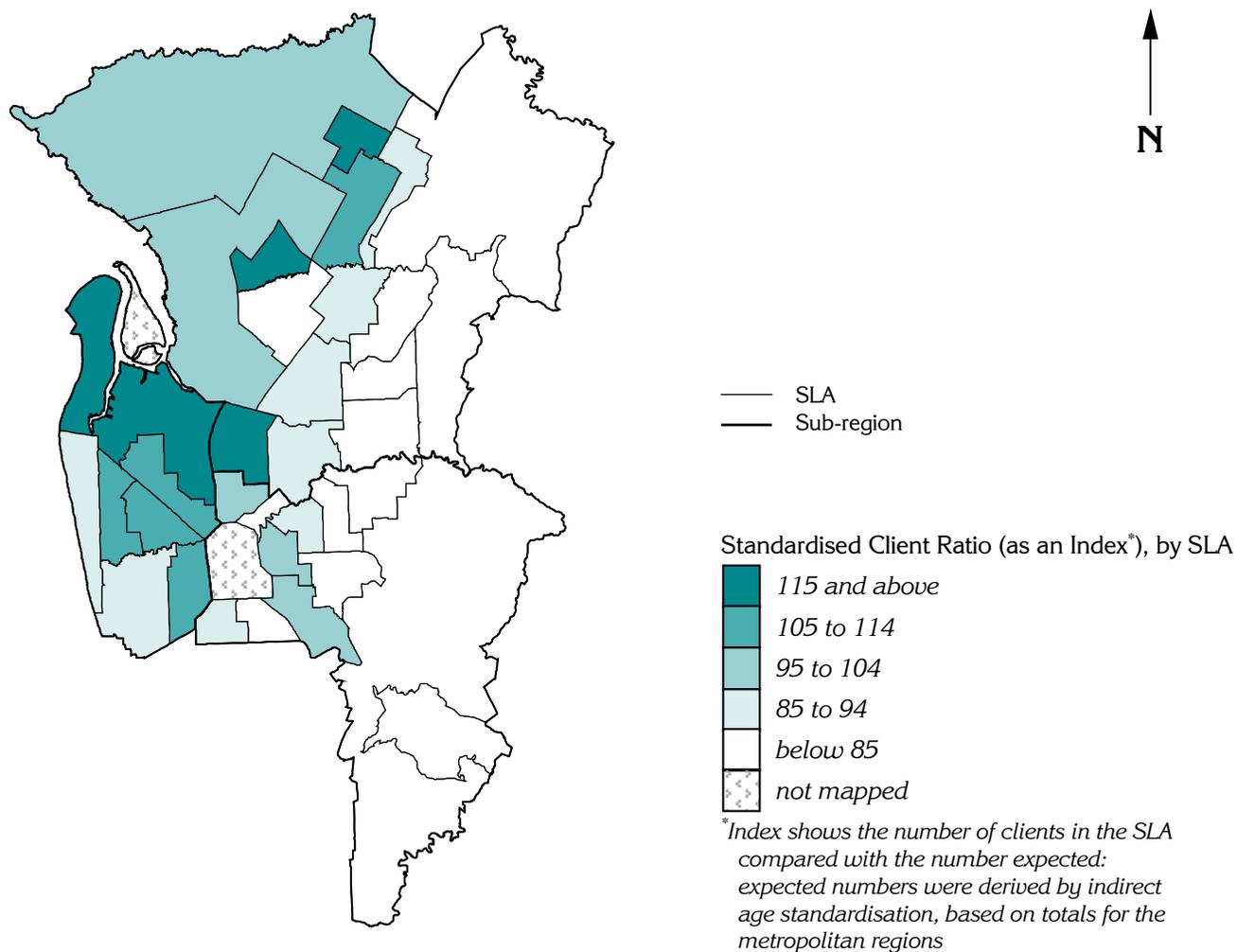


Table 74: Royal District Nursing Service Clients, CNAHS, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	1504	75**
Quintile 2	1277	85**
Quintile 3	2206	92**
Quintile 4	1688	99
Quintile 5: most disadvantaged areas	2193	112*
<b>Rate ratio</b>	..	<b>1.49**</b>
<b>Northern</b>	<b>3,126</b>	<b>93**</b>
<b>Western</b>	<b>3,307</b>	<b>106**</b>
<b>Central East</b>	<b>2,434</b>	<b>79**</b>
<b>CNAHS</b>	<b>8,867</b>	<b>93**</b>
<b>Southern</b>	<b>4,334</b>	<b>100</b>
<b>Metropolitan regions</b>	<b>14,102</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Meals on Wheels: clients

Number of clients in 2003

## Overview

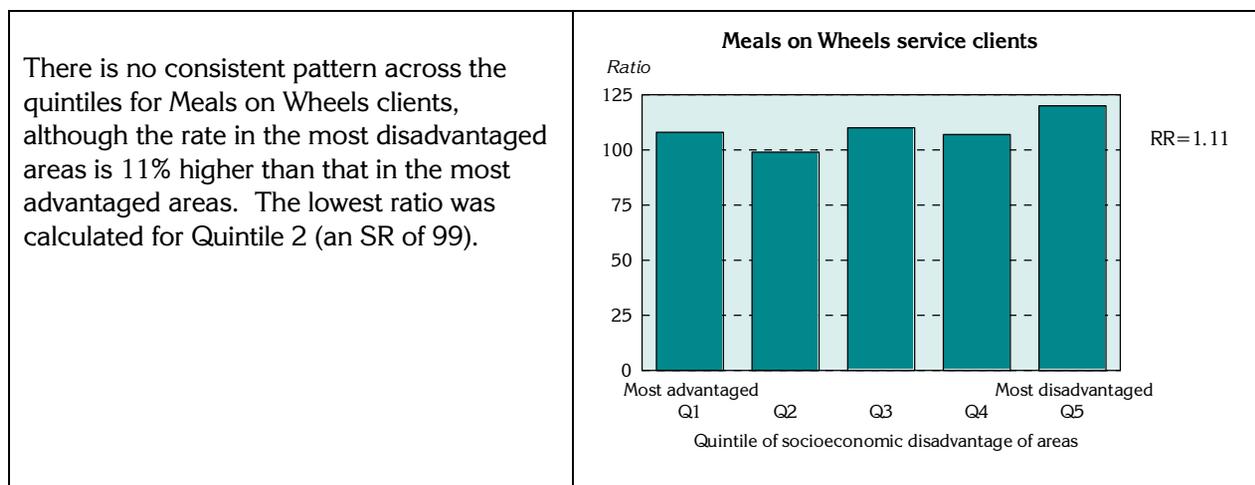
*Each weekday approximately 5,000 meals are delivered to homes throughout South Australia, by people from a pool of 10,000 volunteers. Meals are prepared in 31 kitchens owned and operated by Meals on Wheels Incorporated.*

*Meals are provided to people on a short-term basis – after surgery or illness, as carer support or respite – and on a long-term basis – for people who are aged, chronically ill or disabled. Recurrent funding of Meals on Wheels is derived from the sale of meals (80%), and from the Home and Community Care program (20%). The price of a meal can be kept low (\$4.50) because of the assistance of volunteers.*

Central Northern had a relatively large number of Meals on Wheels clients (2,541 clients). However, there were eight per cent fewer clients in the region (a standardised client ratio (SCR) of 109\*\*) than expected from the metropolitan rates (Table 75). The geographic distribution of clients (Map 74) is different from that in the two previous maps, with the highest rates found in a number of outer eastern and inner SLAs, as well as throughout the north-western suburbs.

Two SLAs in this region had 25% more clients than expected, these were Adelaide Hills - Ranges (an SCR of 125, 26 clients) and Salisbury - Inner North (an SCR of 125, 37 clients). There were also more clients than expected in the SLAs of Playford - West Central (an SCR of 120, 24 clients), Norwood Payneham and St Peters - East (116, 118), Charles Sturt - North-East (113, 125), West Torrens - East (113, 115), West Torrens - West (113, 185), Charles Sturt - Coastal (112, 166) and Charles Sturt - Inner East (111, 112).

No Meals on Wheels clients were recorded in Salisbury Balance. Several SLAs had fewer clients than expected: these included Campbelltown - East (an SCR of 30\*\*, 27 clients), Tea Tree Gully - Hills (33\*\*, nine clients) and - North (35\*\*, eleven), Campbelltown - West (39\*\*, 40), Salisbury - Central (39\*\*, 28), Tea Tree Gully - South (47\*\*, 51), Playford - West (47\*\*, seven clients), Salisbury - North-East (49\*\*, 23), Tea Tree Gully - Central (51\*\*, 28) and Salisbury - South-East (55\*\*, 45).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 74: Meals on Wheels service clients, CNAHS, 2003

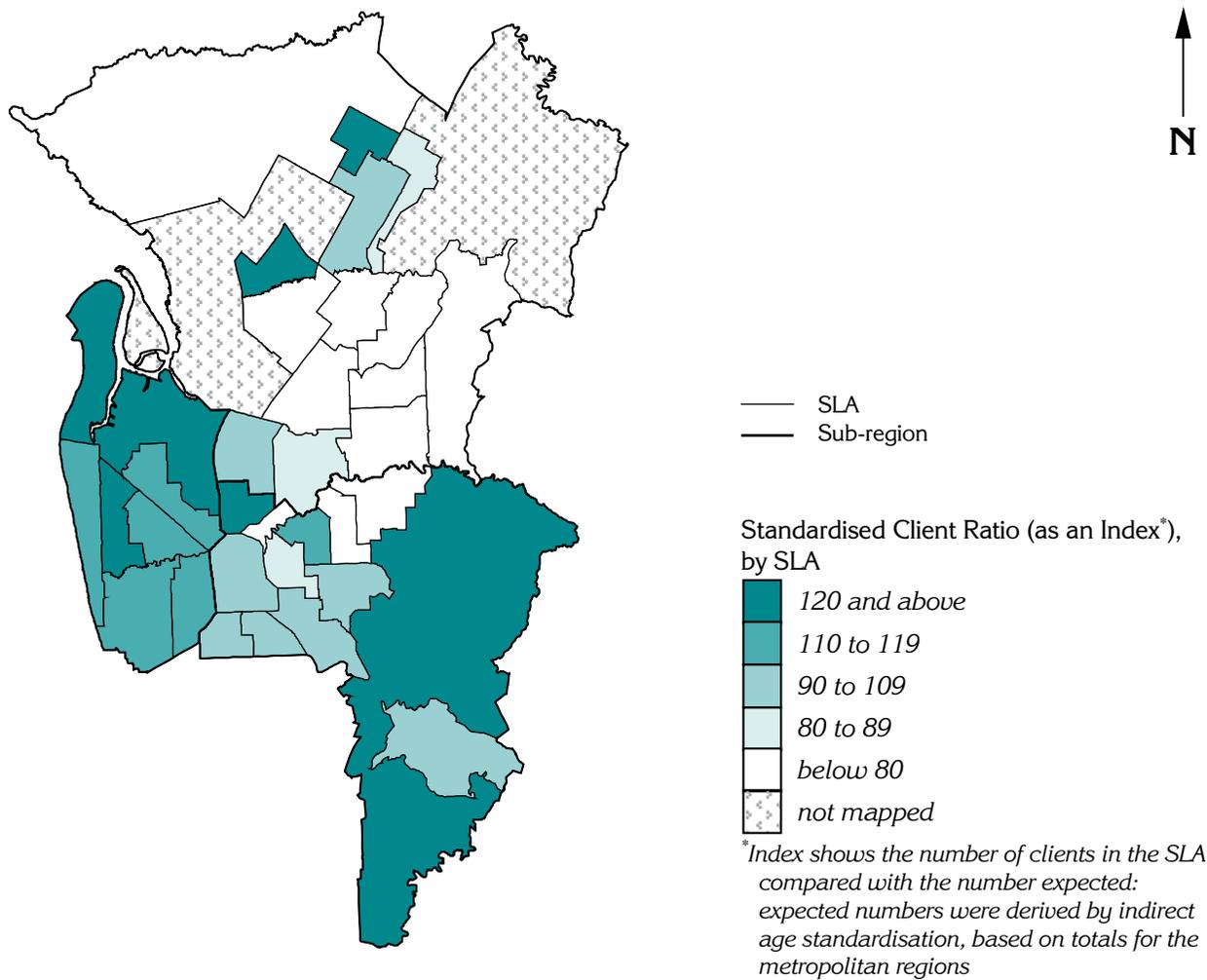


Table 75: Meals on Wheels service clients, CNAHS, 2003

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	547	108
Quintile 2	373	99
Quintile 3	667	110**
Quintile 4	414	107
Quintile 5: most disadvantaged areas	540	120**
<b>Rate ratio</b>	<b>..</b>	<b>1.11</b>
<b>Northern</b>	<b>568</b>	<b>82**</b>
<b>Western</b>	<b>1,110</b>	<b>139**</b>
<b>Central East</b>	<b>863</b>	<b>103</b>
<b>CNAHS</b>	<b>2,541</b>	<b>109**</b>
<b>Southern</b>	<b>1,465</b>	<b>137**</b>
<b>Metropolitan regions</b>	<b>4,085</b>	<b>118**</b>

\* indicates statistical significance: see page 19

# Screening: Breast screening participation

Participation in screening through BreastScreen SA: data from 2001 to 2002

## Overview

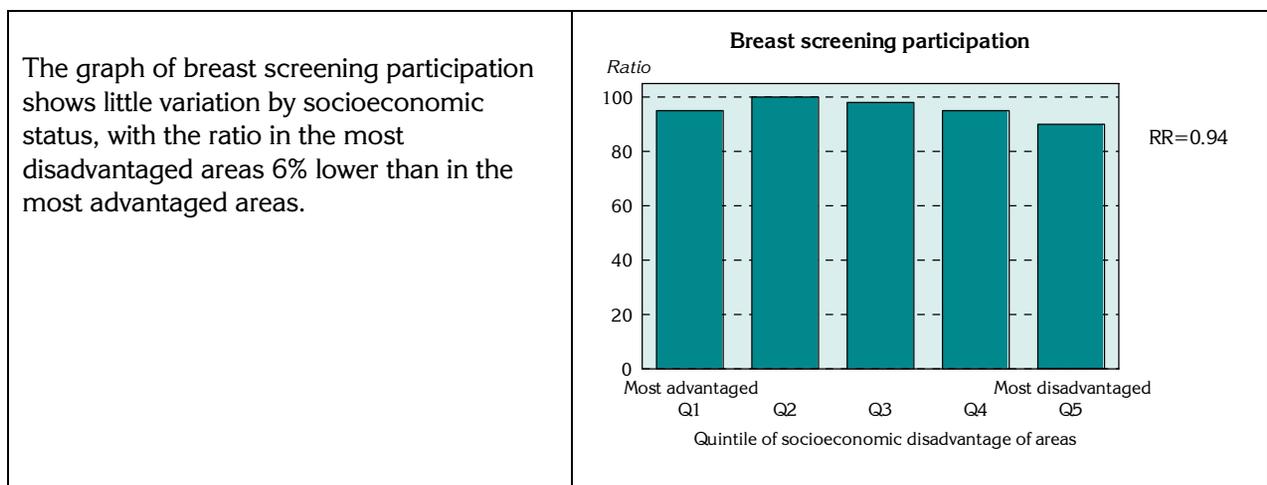
*Breast cancer is a significant public health issue, and, given current knowledge, is not preventable. Therefore, the aim should be early detection and treatment of breast cancers<sup>83</sup>. BreastScreen SA is the South Australian component of BreastScreen Australia, the national breast cancer screening program. The program provides a free screening mammography service on a state-wide basis, with fixed and mobile clinics*

The data shown are the number of attendances for breast screening at any of the six clinics in Metropolitan Adelaide (or the three mobile clinics operating across the State), by females living in the Central Northern region. In any two year period, a small number of women have annual screens (about 7.5% per year). The service primarily targets women aged 50 to 69, who accounted for over three quarters (77.6%) of the screenings undertaken in 2001 and 2002. Details of breast cancers detected through screening are on page 226.

The 24 month participation rate in Central Northern was six per cent lower than expected (a standardised participation ratio (SPR) of 96\*\*, 49,793 participants) (Table 76). There is no clear socioeconomic pattern in the geographic distribution of women participating in this screening program (Map 75), with the highest standardised ratios (SRs) mapped in a number of SLAs adjacent to the city centre (alongside SLAs with the lowest ratios), as well as in the outer north.

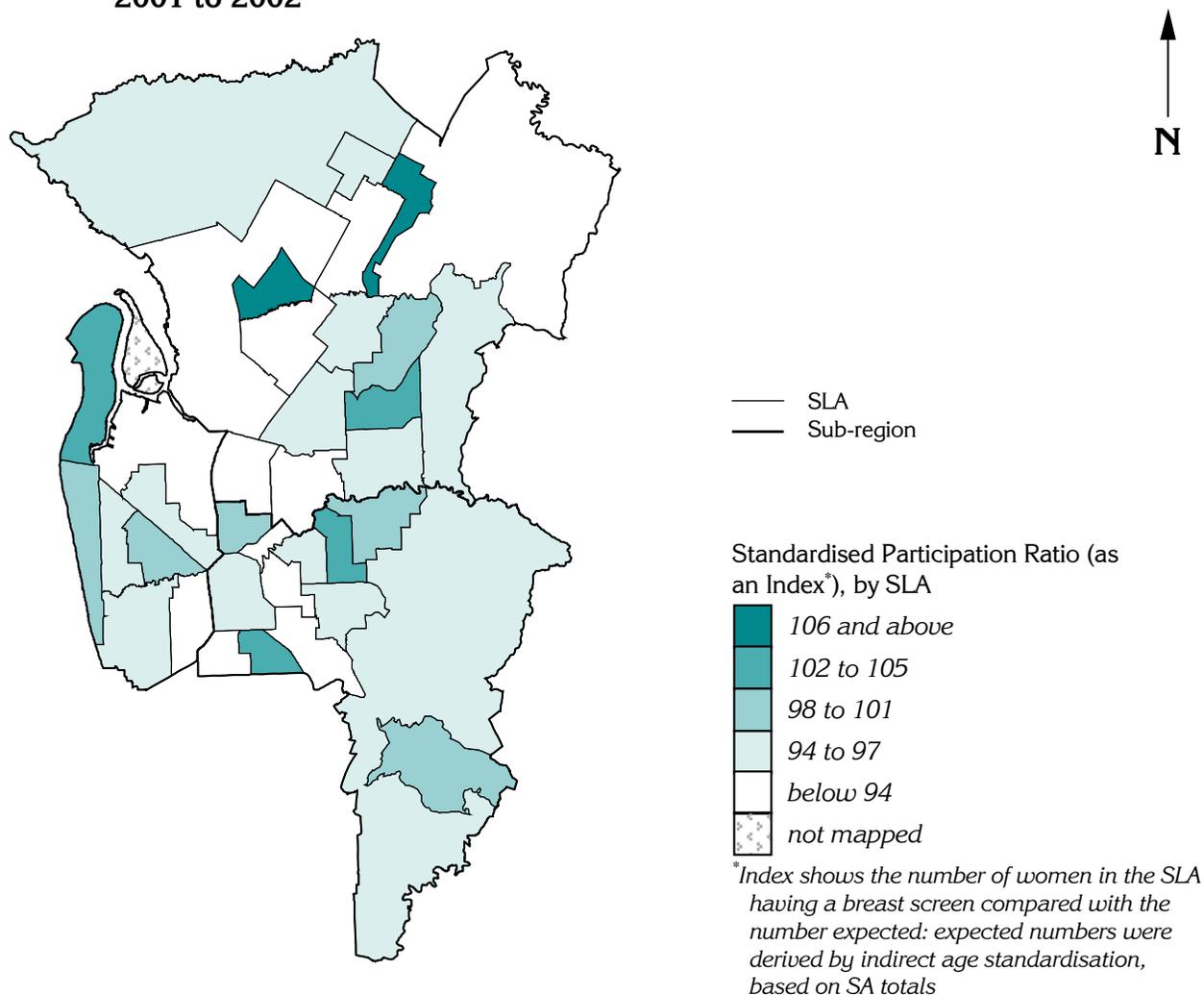
The only elevated level of participation of statistical significance was recorded for women in Playford - East Central (an SPR of 107\*, 946 participants). SLAs with large numbers of women participating included Charles Sturt - Coastal (2,624), Salisbury - South-East (2,535, 96\*), Tea Tree Gully - South (2477, 95\*), and Campbelltown - East (2,182, 99).

SLAs with notably fewer women attending than expected from the State rates included Playford - Hills (an SPR of 72\*\*, 134 women), Salisbury - Central (78\*\*, 1,334), Playford - Elizabeth (86\*\*, 1,527) and Salisbury Balance (86\*\*, 209),



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

**Map 75: Breast screening participation, females aged 50 to 69 years, CNAHS, 2001 to 2002**



**Table 76: Breast screening participation, females aged 50 to 69 years, CNAHS, 2001 to 2002**

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	9,973	95**
Quintile 2	9,881	100
Quintile 3	11,408	98*
Quintile 4	9,690	95**
Quintile 5: most disadvantaged areas	8,841	90**
<b>Rate ratio</b>	<b>..</b>	<b>0.94**</b>
<b>Northern</b>	<b>20,229</b>	<b>94**</b>
<b>Western</b>	<b>14,137</b>	<b>96**</b>
<b>Central East</b>	<b>15,426</b>	<b>97**</b>
<b>CNAHS</b>	<b>49,793</b>	<b>96**</b>
<b>Southern</b>	<b>23,285</b>	<b>104**</b>
<b>Metropolitan regions</b>	<b>73,078</b>	<b>98**</b>
<b>State total</b>	<b>103,781</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Screening: Breast screening outcomes

Cancers found for women participating in screening through BreastScreen SA: data from 2001 to 2002

## Overview

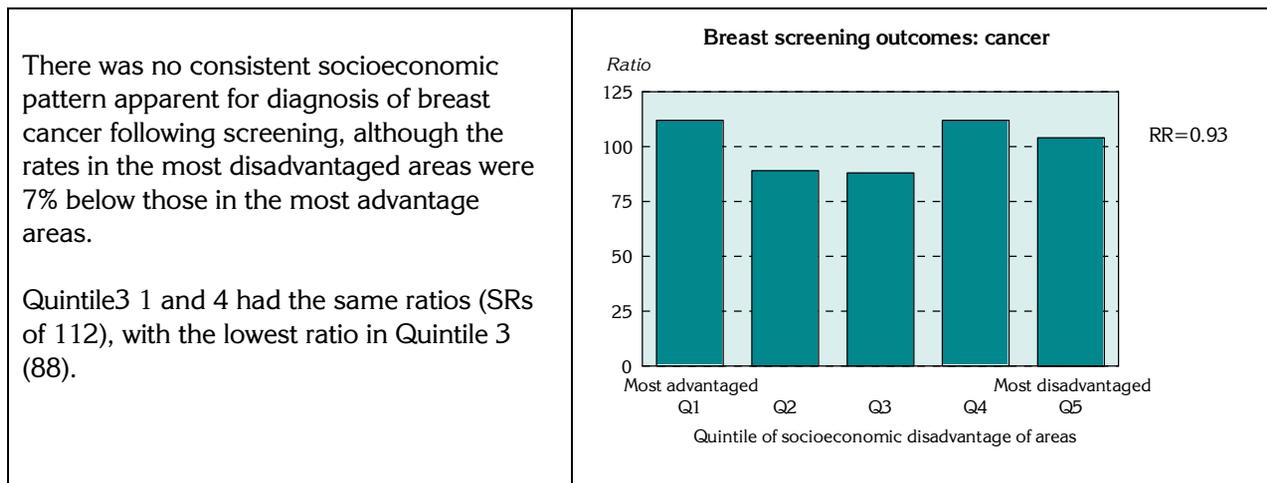
*The data presented here are of women diagnosed with breast cancer as a result of screening through the BreastScreen SA Program. Although there is no apparent socioeconomic pattern associated with diagnosis of cancer, there is some evidence to suggest that the prognosis at diagnosis may differ due to variation in the early detection of breast cancer <sup>84</sup>.*

Central Northern had 318 women diagnosed with breast cancer following screening, the number expected from the State rates (an SR of 100) (Table 77). As seen for screening participation (above), there is no clear socioeconomic pattern in the geographic distribution of women diagnosed with breast cancer through screening (Map 76), with the highest standardised ratios (SRs) mapped in a number of SLAs adjacent to the city centre (alongside SLAs with the lowest ratios), as well as in the outer north.

Over twice the expected number of women from Unley - West were diagnosed with breast cancer following screening (an SR of 214<sup>\*\*</sup>, 14 women), with a similarly highly elevated ratio in Unley - East (173<sup>\*</sup>, 14). None of the other elevated ratios were of statistical significance.

None of the ratios below average were of statistical significance.

The SLA of Salisbury - South East (20 women, an SR of 129) was the only area with more cases of breast cancer found through screening over this two year period.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 76: Breast screening outcomes: cancer, females aged 50 to 69 years, CNAHS, 2001 to 2002

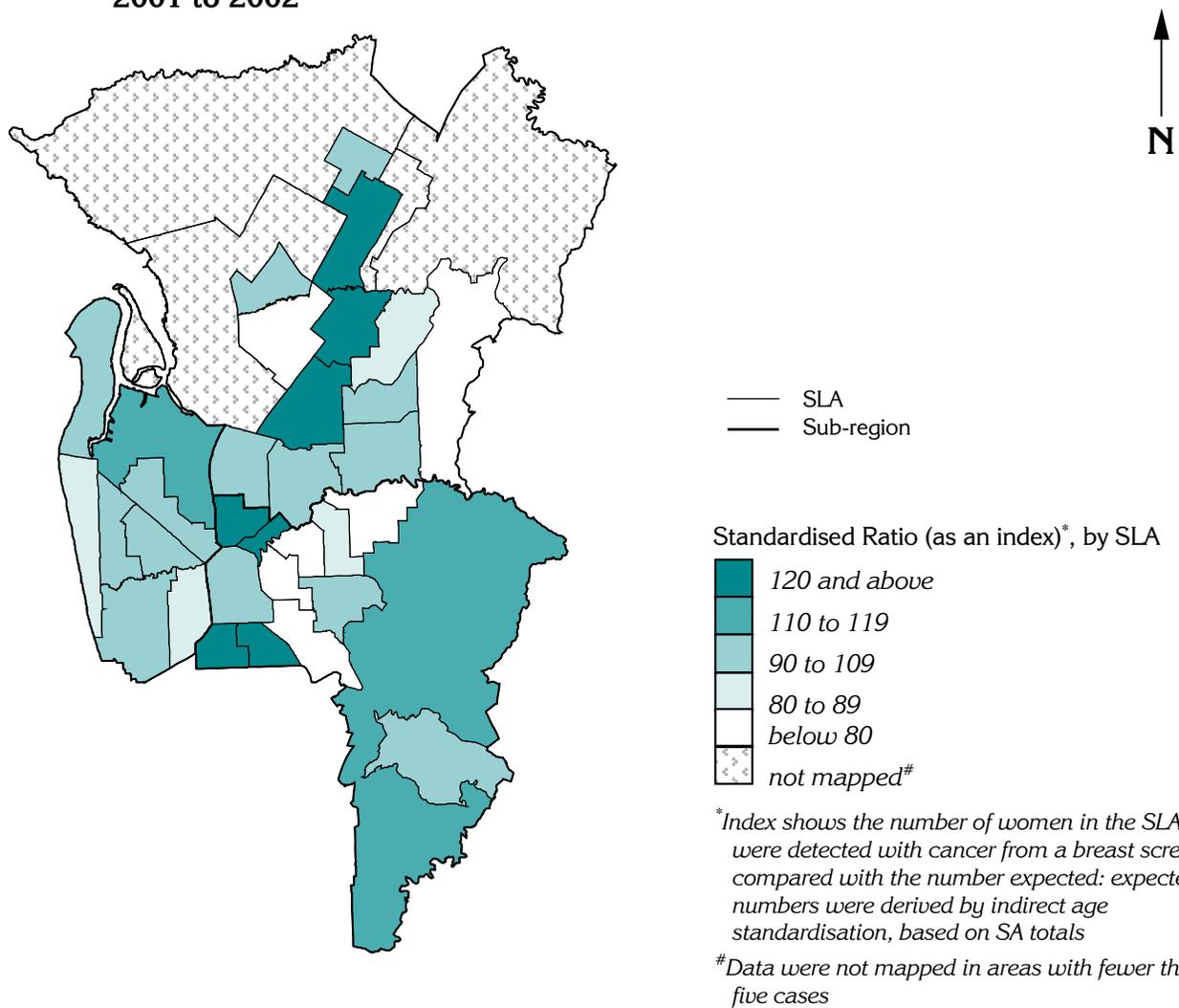


Table 77: Breast screening outcomes: cancer, females aged 50 to 69 years, CNAHS, 2001 to 2002

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	70	112
Quintile 2	55	89
Quintile 3	64	88
Quintile 4	69	112
Quintile 5: most disadvantaged areas	59	104
<b>Rate ratio</b>	<b>..</b>	<b>0.93</b>
<b>Northern</b>	<b>130</b>	<b>101</b>
<b>Western</b>	<b>89</b>	<b>98</b>
<b>Central East</b>	<b>99</b>	<b>102</b>
<b>CNAHS</b>	<b>318</b>	<b>100</b>
<b>Southern</b>	<b>146</b>	<b>100</b>
<b>Metropolitan regions</b>	<b>464</b>	<b>100</b>
<b>State total</b>	<b>659</b>	<b>100</b>

# Screening: Cervical screening participation

Participation in screening for cervical cancer: data from 2001 to 2002

## Overview

*Cervical cancer is one of the most preventable and curable of all cancers. It is the eighteenth most common cancer in Australian women; and it is estimated that up to 90% of the commonest type of cervical cancer may be prevented, if cell changes are detected and treated early<sup>85</sup>. In 1991, Australia adopted an 'organised approach' to preventing cervical cancer, the National Cervical Screening Program, which recommends and encourages all women under 70 years of age who have ever been sexually active to have Pap smears every two years. The key outcome objectives of the Program are to reduce mortality and minimise morbidity from these cancers, and to maximise the efficiency of program delivery and its equity.*

Details of the age of women participating in cervical screening tests in 2001 and 2002, together with data on outcomes of screening, are on page 230.

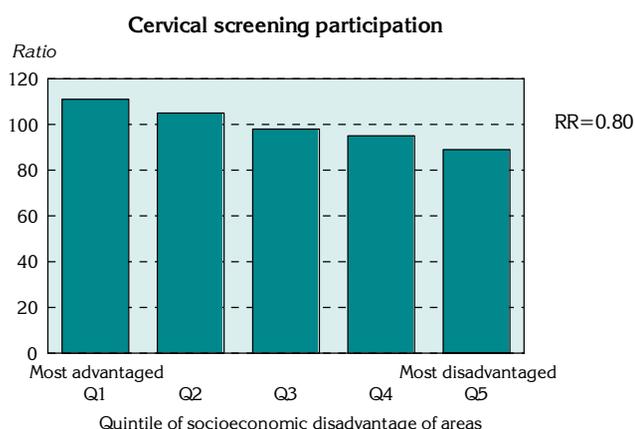
The standardised participation ratio (SPR) for Central Northern was close to average, being one per cent lower than expected from the State rates (an SPR of 99\*\*, 136,931 women) (Table 78). The most highly elevated ratios were located in the city and a number of near-city SLAs, as well as in the east and outer east and south-east, with below average ratios throughout the inner north, north-west and outer north (Map 77).

Adelaide had the most highly elevated SPR with over one third more women participating in cervical screening than expected (an SPR of 130\*\*, 3,214 women). Other SLAs with elevated ratios included Adelaide Hills - Central (an SPR of 118\*\*, 2,845 women), Walkerville (116\*\*, 1,400), Unley - East (115\*\*, 4,229) and Burnside - North-East (114\*\*, 4,317) and - South-West (111\*\*, 4,091).

Large numbers of women participating in cervical screening were from the SLAs of Salisbury - South-East (6,446 women, an SPR of 101), Tea Tree Gully - South (6,275, 104\*), Charles Sturt - Coastal (5,795, 102) and Campbelltown - East (5,314, 103).

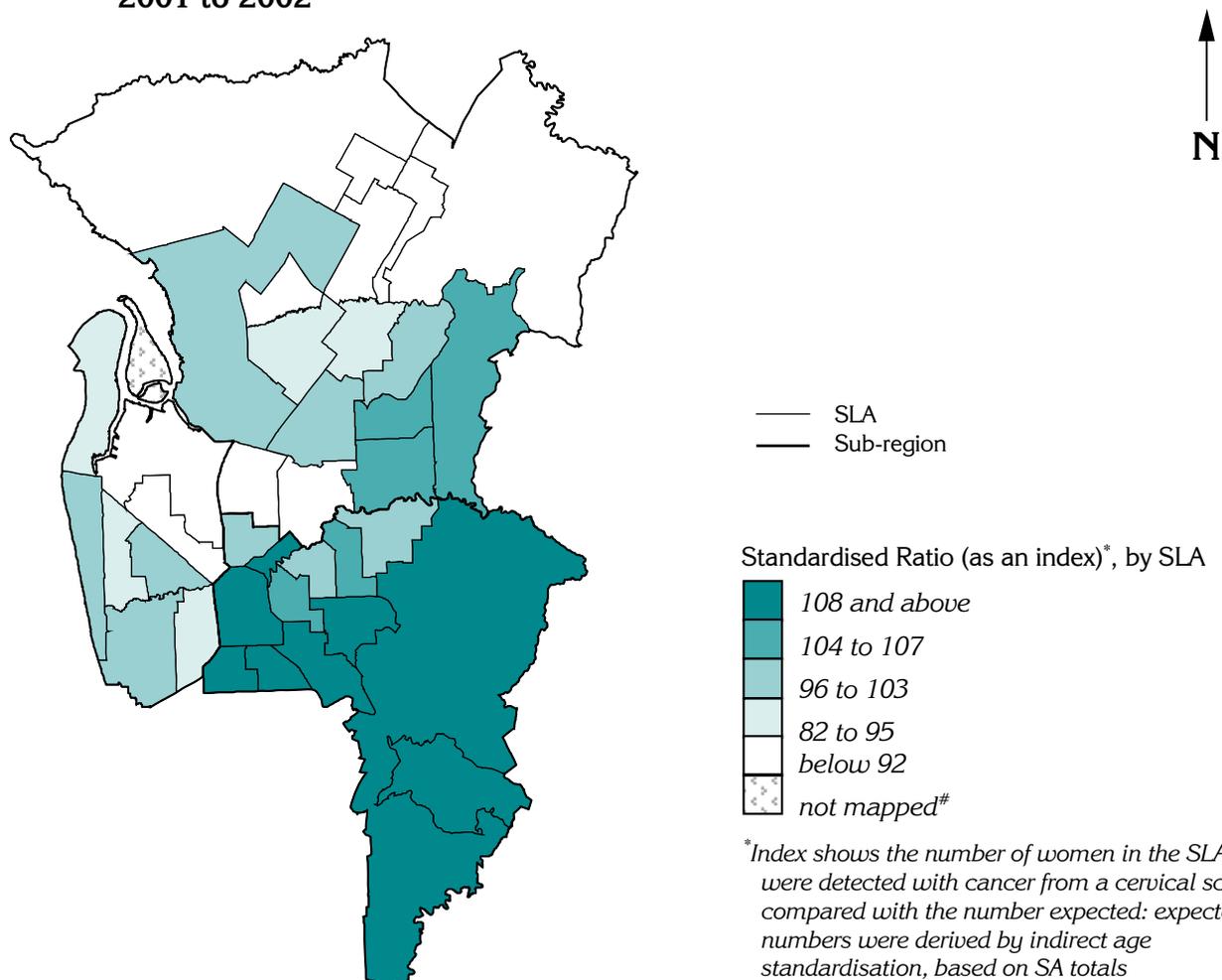
All of the Playford SLAs had low participation ratios. Playford - Elizabeth had the lowest (an SPR of 80\*\*, 3,360 women), followed by - East Central (83\*\*, 2,851), - West Central (84\*\*, 1,797), - West (87\*\*, 1,248) and - Hills (89\*\*, 463). Port Adelaide Enfield - Inner (89\*\*, 2,915) and - Port (90\*\*, 3,930) also had low participation ratios.

There is a clear socioeconomic gradient in participation rates for cervical screening, with the highest ratio in the most advantaged areas and the lowest (20% lower, a rate ratio of 0.80\*\*) in the most disadvantaged areas.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

**Map 77: Cervical screening participation, females aged 20 to 69 years, CNAHS, 2001 to 2002**



**Table 78: Cervical screening participation, females aged 20 to 69 years, CNAHS, 2001 to 2002**

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	29,213	111**
Quintile 2	28,377	105**
Quintile 3	29,569	98**
Quintile 4	24,000	95**
Quintile 5: most disadvantaged areas	25,769	89**
<b>Rate ratio</b>	<b>..</b>	<b>0.80**</b>
<b>Northern</b>	<b>56,337</b>	<b>94**</b>
<b>Western</b>	<b>35,666</b>	<b>95**</b>
<b>Central East</b>	<b>44,926</b>	<b>110**</b>
<b>CNAHS</b>	<b>136,931</b>	<b>99**</b>
<b>Southern</b>	<b>59,501</b>	<b>103**</b>
<b>Metropolitan regions</b>	<b>196,432</b>	<b>100</b>
<b>State total</b>	<b>266,634</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Screening: Cervical screening outcomes

*Outcomes of screening for cervical cancer: data from 2001 to 2002*

## Overview

*The data presented here are of women diagnosed with an abnormality as a result of cervical screening: the data include both possible and definite abnormalities. The data are presented as being either a high grade or a low grade abnormality.*

Women participating in cervical screening were spread relatively evenly across the age groups from 25 to 49 years, with proportions dropping off to younger and older ages (Table 79). The distribution of women assessed as having a high grade abnormality (0.03% of women screened) was concentrated in fewer age groups, with two thirds being between the ages of 20 and 39 years. Those assessed as having a low grade abnormality (1.7% of women screened) were most predominant at younger ages.

**Table 79: Cervical abnormalities detected through screening, by age, CNAHS, 2001 to 2002**

Age (years)	Screened		Abnormalities (%)		
	No	%	High grade	Low grade	Total
15-19	10,331	3.6	4.2	9.7	8.8
20-24	25,393	9.0	14.7	20.8	19.8
25-29	30,583	10.8	20.0	16.6	17.2
30-34	35,950	12.7	20.2	12.1	13.5
35-39	36,423	12.9	10.9	9.3	9.5
40-44	36,006	12.7	6.9	8.6	8.3
45-49	31,076	11.0	6.4	7.3	7.1
50-54	26,587	9.4	5.2	6.1	6.0
55-59	19,597	6.9	3.0	4.2	4.0
60-64	14,425	5.1	1.3	2.4	2.2
65-69	10,594	3.7	2.3	1.6	1.7
70 and over	6,240	2.2	2.0	1.1	1.1
<b>Total:</b>					
%	..	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
No.	<b>283,205</b>	..	<b>948</b>	<b>4,721</b>	<b>5,645</b>

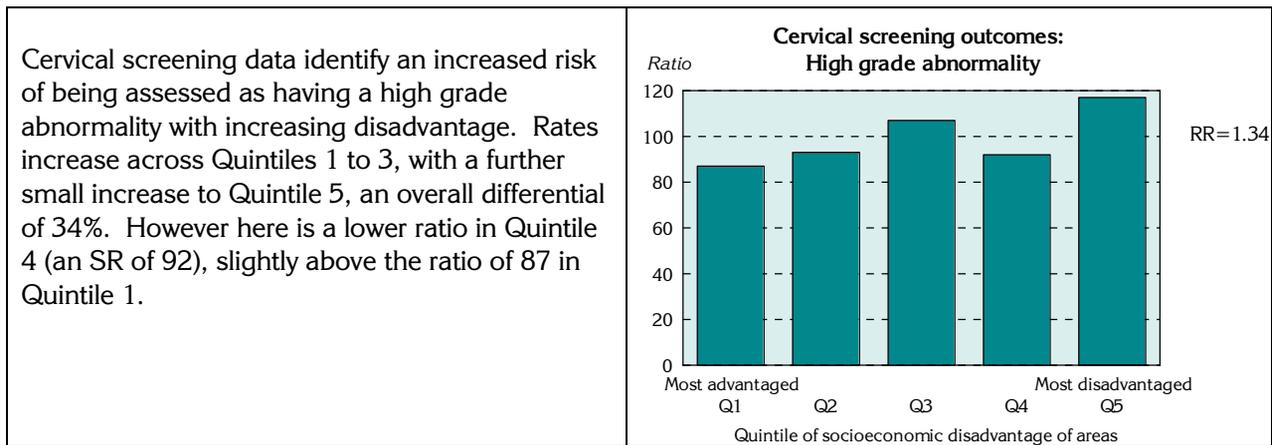
### High grade abnormalities

SLAs with elevated ratios for the detection of high grade abnormalities (Map 78a) generally followed the pattern of socioeconomic disadvantage shown in Map 23, page 113.

Over 2001 and 2002, 875 women were assessed as having a high grade abnormality (a standardised ratio (SR) of 99). Elevated ratios were mapped in a number of SLAs including Port Adelaide Enfield - Coast (an SR of 155\*\*, 45 women) and - Inner (144, 28), Playford - Elizabeth (151\*, 34), - West Central (141, 18) and - East Central (123, 24), and Unley - West (138, 33).

Other than those mentioned above, the largest numbers of females assessed as having a high grade abnormality were from Tea Tree Gully - South (37 women, an SR of 94), Salisbury - South-East (36, 88), West Torrens - West (34, 107), and Port Adelaide Enfield - East (33, 106).

Adelaide Hills - Ranges had the lowest SR in the metropolitan regions, with nearly half the expected number of high grade abnormalities (an SR of 54, six women). This was followed by Norwood Payneham and St Peters - West (70, 18), Tea Tree Gully - Hills (70, eleven), Adelaide Hills - Central (74, 12), Campbelltown - West (74, 16) and -East (74, 24). None of these ratios were statistically significant.



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

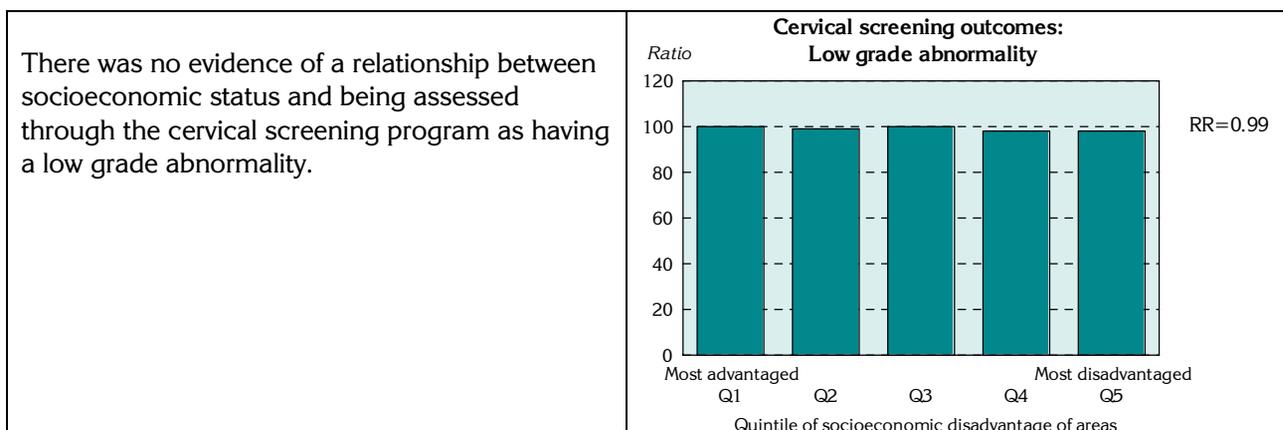
### Low grade abnormalities

The geographic distribution of ratios across SLAs is similar to that for high grade abnormalities, although the highest ratios are generally not as high, and the lowest are not as low (Map 78b).

There were 4,199 women assessed as having a low grade abnormality in Central Northern, one per cent fewer than expected from the State rates, a standardised ratio (SR) of 99. Elevated ratios were mapped in the SLAs of Unley - West (an SR of 121\*, 140 women), Adelaide (112, 138), West Torrens - East (111, 152) and - West (108, 164), Tea Tree Gully - Hills (109, 82) and - Central (107, 172), Port Adelaide Enfield - Inner (109, 100) and Campbelltown - West (107, 112).

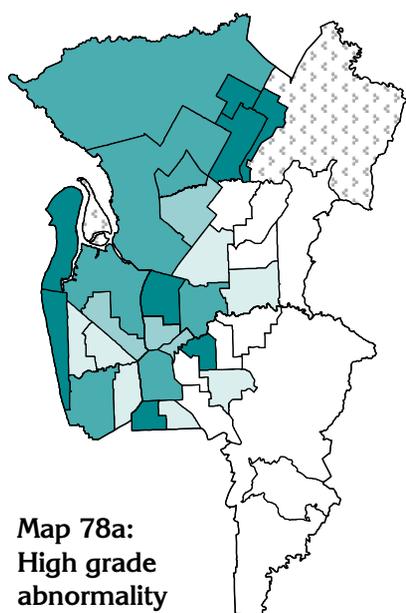
Large numbers of female residents in the following SLAs were diagnosed as having a low grade abnormality: Salisbury - South-East (192 women, 98), Tea Tree Gully - South (184, 97) and - Central (172, 107), West Torrens - West (108, 164) and - East (111, 152), Charles Sturt - Coastal (157, 93), and Campbelltown - East (151, 98).

Low SRs were mapped in the Playford SLAs of - West (an SR of 57\*\*, 21 women), - Hills (78, 12) and - East Central (82, 75), Salisbury Balance (80, 27) and Adelaide Hills - Central (88, 73) and - Ranges (88, 53).

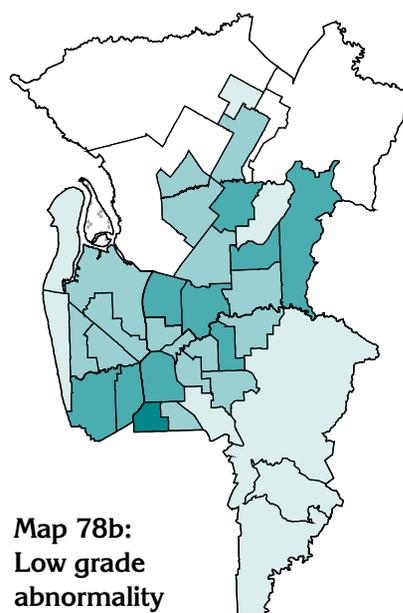


Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

**Map 78: Cervical screening outcomes, females aged 20 to 69 years, CNAHS, 2001 to 2002**



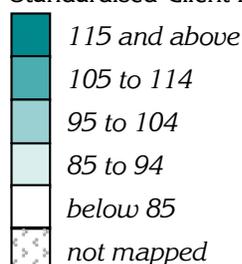
**Map 78a:  
High grade  
abnormality**



**Map 78b:  
Low grade  
abnormality**



Standardised Client Ratio (as an Index<sup>\*</sup>), by SLA



*\*Index shows the number of women in the SLA with possible or definite abnormalities from a cervical screen compared with the number expected: expected numbers were derived by indirect age standardisation, based on SA totals*

*#Data were not mapped in areas with fewer than five cases*

— SLA  
— Sub-region

**Table 80: Cervical screening outcomes, females aged 20 to 69 years, CNAHS, 2001 to 2002**

Area	High grade abnormality		Low grade abnormality	
	Number	Standardised ratio	Number	Standardised ratio
<b>CNAHS</b>				
Quintile 1: most advantaged areas	159	87	890	100
Quintile 2	169	93	877	99
Quintile 3	203	107	907	100
Quintile 4	141	92	719	98
Quintile 5: most disadvantaged areas	203**	117	806	98
<b>Rate ratio</b>	..	<b>1.34**</b>	..	<b>0.99</b>
<b>Northern</b>	<b>377</b>	<b>102</b>	<b>1,731</b>	<b>98</b>
<b>Western</b>	<b>242</b>	<b>106</b>	<b>1,070</b>	<b>99</b>
<b>Central East</b>	<b>257</b>	<b>90</b>	<b>1,398</b>	<b>100</b>
<b>CNAHS</b>	<b>875</b>	<b>99</b>	<b>4,199</b>	<b>99</b>
<b>Southern</b>	<b>397</b>	<b>107</b>	<b>1,970</b>	<b>109**</b>
<b>Metropolitan regions</b>	<b>1,273</b>	<b>102</b>	<b>6,170</b>	<b>102</b>
<b>State total</b>	<b>1,683</b>	<b>100</b>	<b>8,105</b>	<b>100</b>

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# General medical practitioners: Population per GP

Population per estimated full-time work load equivalent general medical practitioner, 2002/03

## Overview

**The full-time workload equivalent (FWE\*) provides a measure of the supply of GPs and the level of their activity in each SLA.**

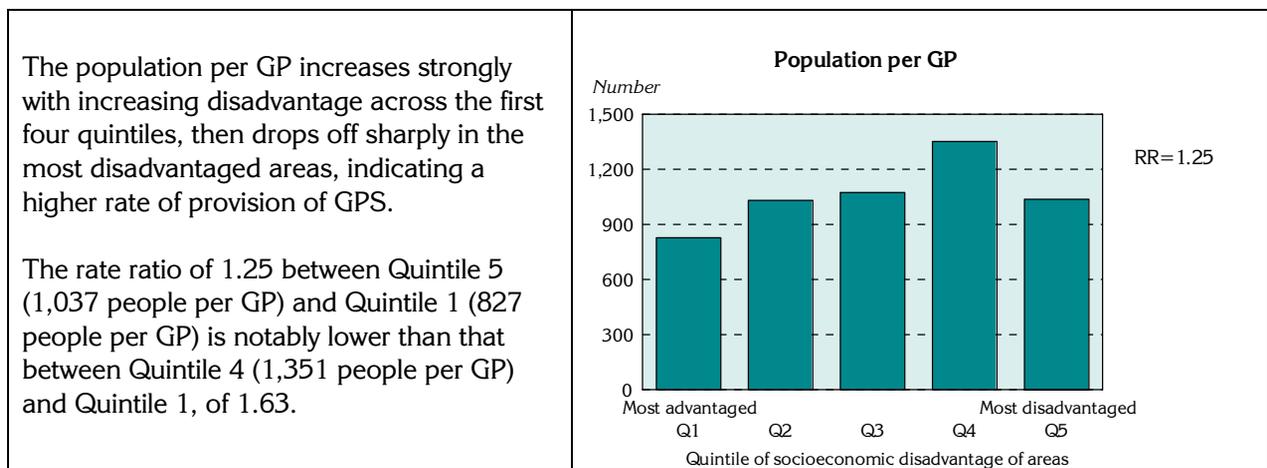
When using these data, readers should be mindful that people living in an SLA with a high rate of population per GP (low level of provision) may use a GP in an adjacent area with a lower rate of population per GP (high level of provision). In some cases, this may be quite close to their home; in others, access may be more difficult, involving travel to a GP. Caution should also be exercised in using the data for the City of Adelaide, where the relatively high supply results from the use in the calculation of the usual resident population, rather than the much larger day-time (working) population.

In the Central Northern region, there were 1,039 people per GP, with 739 FWE GPs (Table 81). The overall impression from Map 79 is one of high rates of provision (areas mapped white) of GPs across the inner, middle and some beachside suburbs, as well as in much of the outer north. Low rates (areas mapped in the darkest shade) are more common in outer SLAs.

Within this region, the SLAs with the largest populations per GP were Playford - West (2,883 people per GP, 2.9 FWE GPs), Tea Tree Gully - North (2,762, 9.8), Salisbury - North-East (2,529, 8.9%), Port Adelaide Enfield - Inner (2,165, 9.1), Salisbury - South-East (2,126, 16.3), West Torrens - West (2,022, 14.2), Campbelltown - East (1,790, 15.5) and Playford - East Central (1,687, 11.6).

There were no GPs located in Salisbury Balance, despite a population of 5,805 people. In contrast, there were 5.1 FWE GPs in Walkerville (1,383 people per GP), an SLA with a similar population, of 7,052 people. The smallest population per GP occurred in Adelaide (347 people, 38.9 FWE).

Other SLAs with relatively low population/GP ratios were Norwood Payneham and St Peters - West (561 people per GP, 31.9 FWE GPs), Prospect (636, 30.3), Burnside - South-West (659, 32.1), Unley - East (712, 27.6), Salisbury - Inner North (714, 35), Norwood Payneham and St Peters - East (714, 22.5), West Torrens - East (752, 31.7), Charles Sturt - Inner East (757, 28.4) and - North-East (786, 32.9).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

\*The FWE value is calculated for each GP location by dividing the GP's total Medicare billing (Schedule fee value of services provided during the reference period) by the mean billing of full-time doctors in that derived major speciality for the reference period. Thus, a GP earning 20% more than the mean billing of full-time doctors is shown as 1.2 FWE.

Map 79: Population per GP, CNAHS, 2002/03

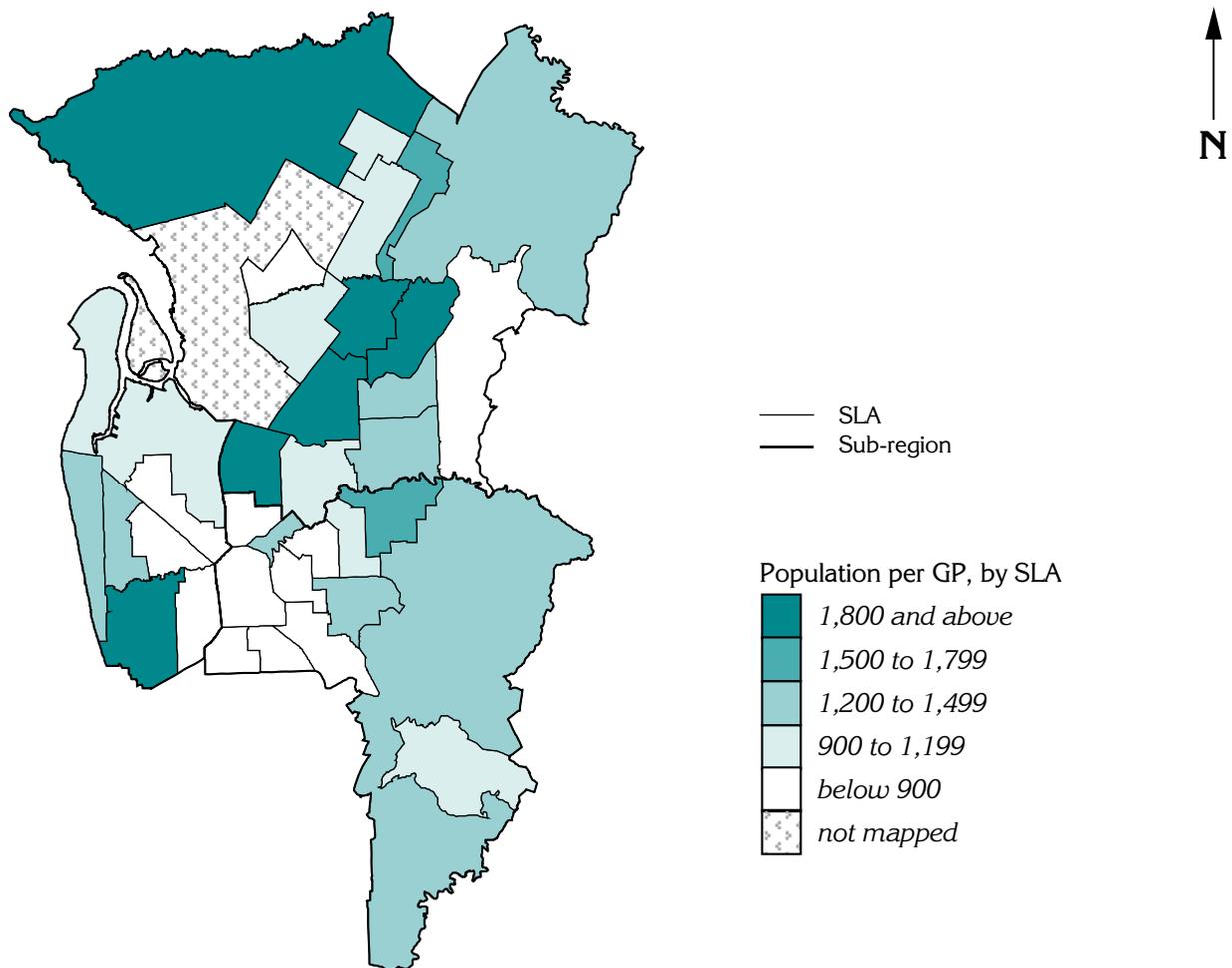


Table 81: Population per GP, CNAHS, 2002/2003

Area	Population per GP	FWE
<b>CNAHS</b>		
Quintile 1: most advantaged areas	827	173.2
Quintile 2	1,031	141.7
Quintile 3	1,074	157.6
Quintile 4	1,351	104.0
Quintile 5: most disadvantaged areas	1,037	162.5
<b>Rate ratio</b>	<b>1.25</b>	<b>1.25</b>
Northern	1,340	249
Western	1,028	205
Central East	784	285
<b>CNAHS</b>	<b>1,039</b>	<b>739.0</b>
<b>Southern</b>	<b>1,234</b>	<b>265.8</b>
Metropolitan regions	1,090	1,004.8
State total	1,126	1,350.4

# General medical practitioner services: male patients

*Consultations with general medical practitioners: Unreferred attendances under Medicare for services provided by general and vocationally registered practitioners (not specialist medical practitioners), delivered at a surgery or clinic, a patient's home, or an institution: data from 2002/03*

## Overview

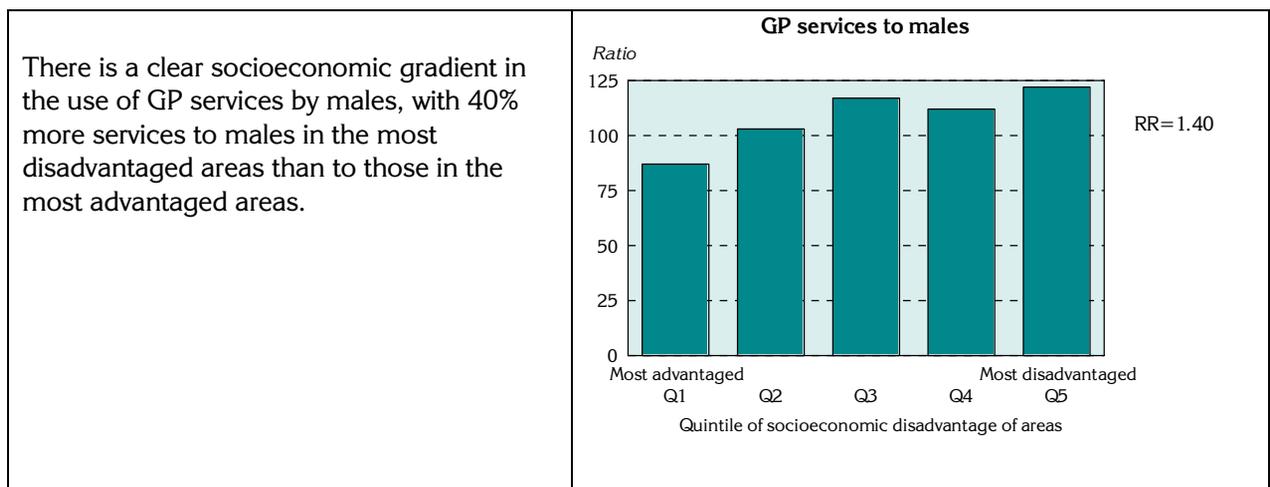
**General practitioners offer a wide range of primary health care services and are the 'front line' of the Australian health care system. In metropolitan regions, low socioeconomic (SES) groups consult general practitioners more frequently than high SES groups<sup>86</sup>. The primary reason is their poorer health and hence greater medical need (however, distributional, operational and financial factors associated with the provision of general practice services are also important).**

There were 1,622,154 GP services to males in the Central Northern region, 9 per cent more than expected from the State rates, given the age profile of males in the region (a standardised ratio (SR) of 109\*\*) (Table 82). At the SLA level there is a marked separation between areas with high, and those with low, use of GP services by males (Map 80), closely following the pattern of socioeconomic disadvantage shown in Map 23, page 113.

A number of SLAs in the region had a higher than expected number of services for males, including Salisbury - Inner North (an SR of 140\*\*, 62,044 services), Playford - East Central (138\*\*, 47,087), Port Adelaide Enfield - Port (137\*\*, 70,664) and Playford - Elizabeth (133\*\*, 68,178). There were also elevated ratios in Charles Sturt - North-East (an SR of 129\*\*, 65,680), Adelaide (127\*\*, 34,777), Salisbury - Central (126\*\*, 65,507), Playford - West Central (125\*\*, 30,299), Port Adelaide Enfield - East (121\*\*, 59,112), Playford - West (120\*\*, 19,600), Salisbury - South-East (118\*\*, 77,505), Charles Sturt - Inner East (118\*\*, 52,142) and West Torrens - East (115\*\*, 54,668).

The SLAs with the largest number of GP services used by males in Central Northern were Port Adelaide Enfield - Coast (69,273 services, an SR of 105\*\*), Tea Tree Gully - South (66,424, 101), Charles Sturt - Coastal (63,869, 98\*\*), West Torrens - West (60,925, 102\*\*), Campbelltown - East (59,564, 110\*\*), Charles Sturt - Inner West (57,592, 113\*\*), Tea Tree Gully - Central (49,104, 97\*\*), Salisbury - North-East (45,370, 104\*\*), Tea Tree Gully - North (45,300, 98\*\*), Campbelltown - West (42,646, 108\*\*) and Port Adelaide Enfield - Inner (42,548, 104\*\*).

The lowest ratios of GP services for males were recorded for Burnside - South-West (an SR of 77\*\*, 31,834 services), followed by Tea Tree Gully - Hills (80\*\*, 20,417), Walkerville (84\*\*, 12,105), Unley - East (85\*\*, 31,023), Adelaide Hills - Ranges (85\*\*, 17,430) and Burnside - North-East (85\*\*, 36,511).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 80: GP services to males, CNAHS, 2002/03

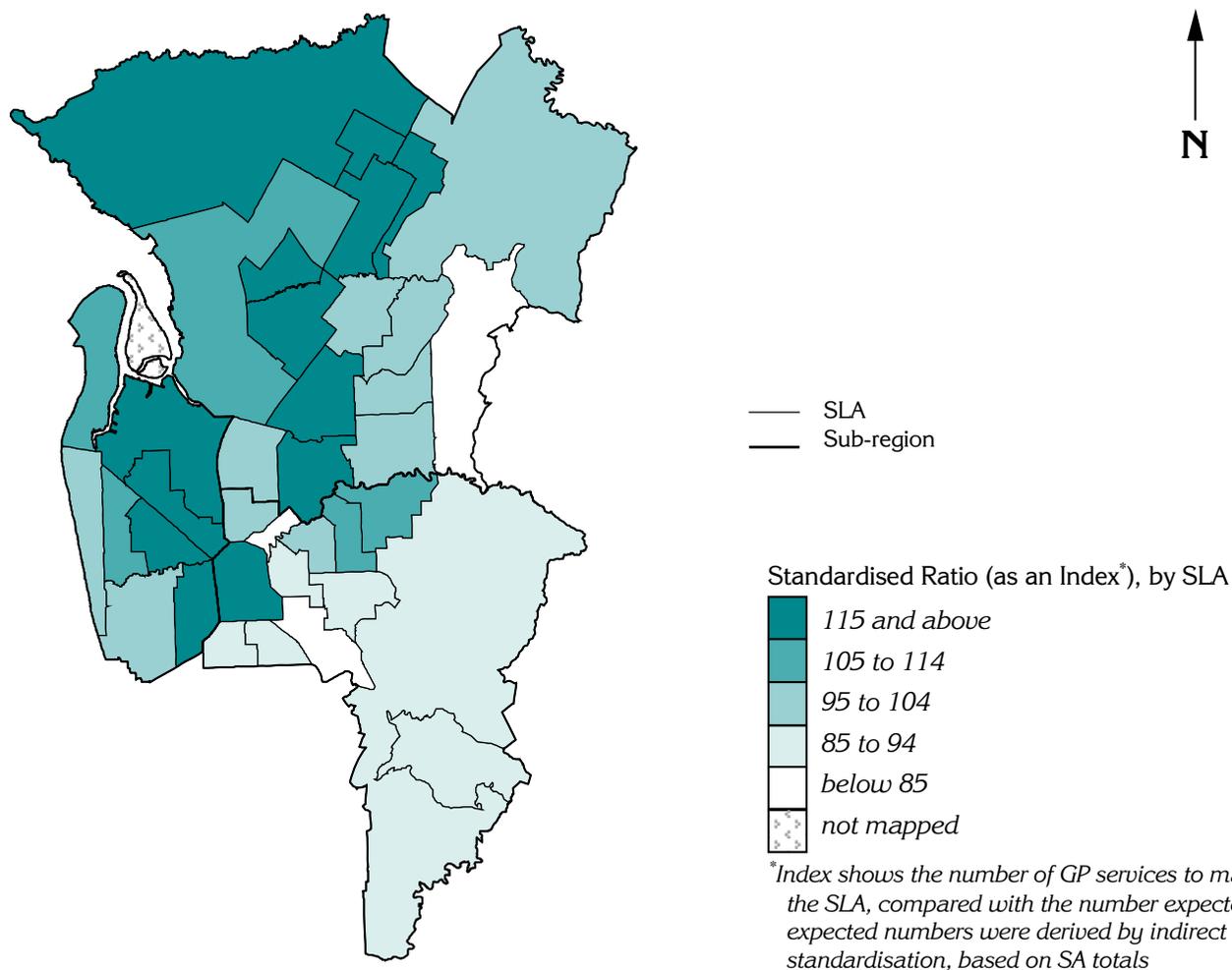


Table 82: GP services to males, CNAHS, 2002/03

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	233,278	87**
Quintile 2	288,812	103**
Quintile 3	372,465	117**
Quintile 4	311,321	112**
Quintile 5: most disadvantaged areas	416,206	122**
<b>Rate ratio</b>	<b>..</b>	<b>1.40**</b>
<b>Northern</b>	<b>715,247</b>	<b>110**</b>
<b>Western</b>	<b>494,813</b>	<b>121**</b>
<b>Central East</b>	<b>412,022</b>	<b>96**</b>
<b>CNAHS</b>	<b>1,622,082</b>	<b>109**</b>
<b>Southern</b>	<b>618,008</b>	<b>97**</b>
<b>Metropolitan regions</b>	<b>2,240,090</b>	<b>106**</b>
<b>State total</b>	<b>2,993,485</b>	<b>100</b>

\* indicates statistical significance: see page 19

# General medical practitioner services: female patients

Consultations with general medical practitioners: Unreferred attendances under Medicare: data from 2002/03

## Overview

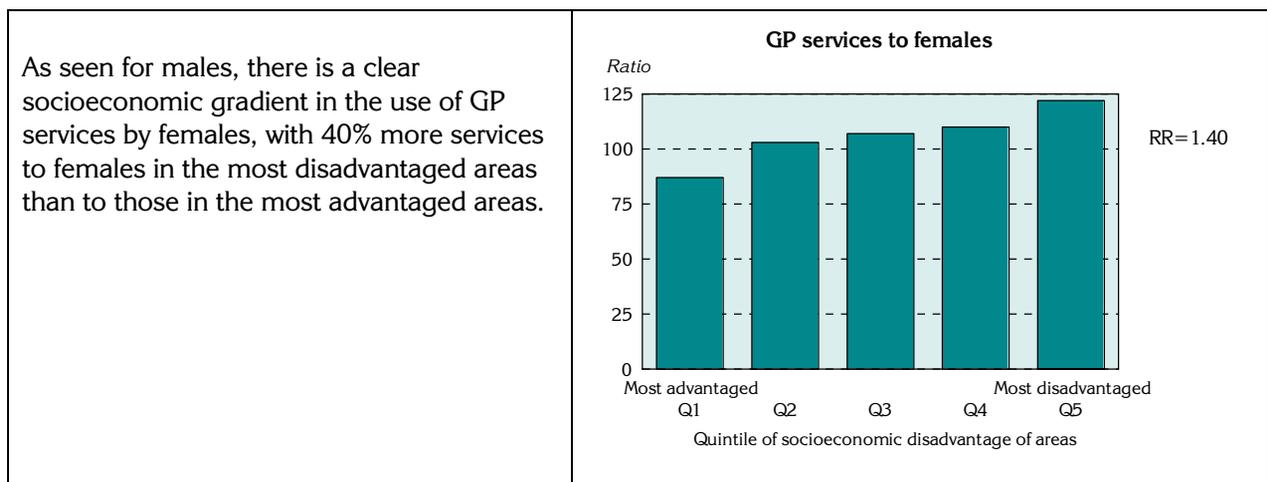
**General practitioners offer a wide range of primary health care services and are the ‘front line’ of the Australian health care system. In metropolitan regions, low socioeconomic (SES) groups consult general practitioners more frequently than high-SES groups<sup>86</sup>. The primary reason is their poorer health and hence greater medical need (however, distributional, operational and financial factors associated with the provision of general practice services are also important).**

There were six per cent more GP services provided to females in the Central Northern region than expected (106\*\*, 2,330,668) (Table 83), with a marked separation between areas with high, and those with low, use of GP services by females (Map 81), closely following the pattern of socioeconomic disadvantage shown in Map 23, page 113.

The most highly elevated standardised ratio (SR) was recorded for women in Salisbury - Inner North, with 44% more services than expected from the State rates (an SR of 144\*\*, 86,277 services). There were also elevated SRs in Adelaide (139\*\*, 50,182), Playford - East Central (132\*\*, 62,413), Playford - West Central (129\*\*, 41,474), Port Adelaide Enfield - Port (127\*\*, 95,531), Playford - Elizabeth (125\*\*, 93,288), Salisbury - Central (120\*\*, 89,300), Salisbury - South-East (119\*\*, 109,813), Port Adelaide Enfield - Coast (119\*\*, 97,717), Playford - West (118\*\*, 24,277), Charles Sturt - North-East (116\*\*, 87,027) and Salisbury Balance (113\*\*, 14,702).

Large numbers of GP services to women were recorded in the SLAs of Tea Tree Gully - South (96,347 services, an SR of 101), Charles Sturt - Coastal (91,512, 96\*\*), West Torrens - West (90,248, 99\*), Port Adelaide Enfield - East (108\*\*, 88,420), Campbelltown - East (107\*\*, 84,323), Charles Sturt - Inner West (81,038, 109\*\*), West Torrens - East (74,153, 106\*\*) and Tea Tree Gully - Central (72,504, 101\*\*).

The SLA with the lowest SR in the metropolitan regions was Walkerville (an SR of 83\*\*, 18,779 services). There were also fewer services than expected in Burnside - South-West (85\*\*, 56,514), Unley - East (86\*\*, 53,324), Unley - West (87\*\*, 45,052), Norwood Payneham and St Peters - West (87\*\*, 47,128), Burnside - North-East (88\*\*, 59,546), Adelaide Hills - Ranges (89\*\*, 23,539), Tea Tree Gully - Hills (89\*\*, 29,950) and Adelaide Hills - Central (91\*\*, 31,805).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 81: GP services to females, CNAHS, 2002/03

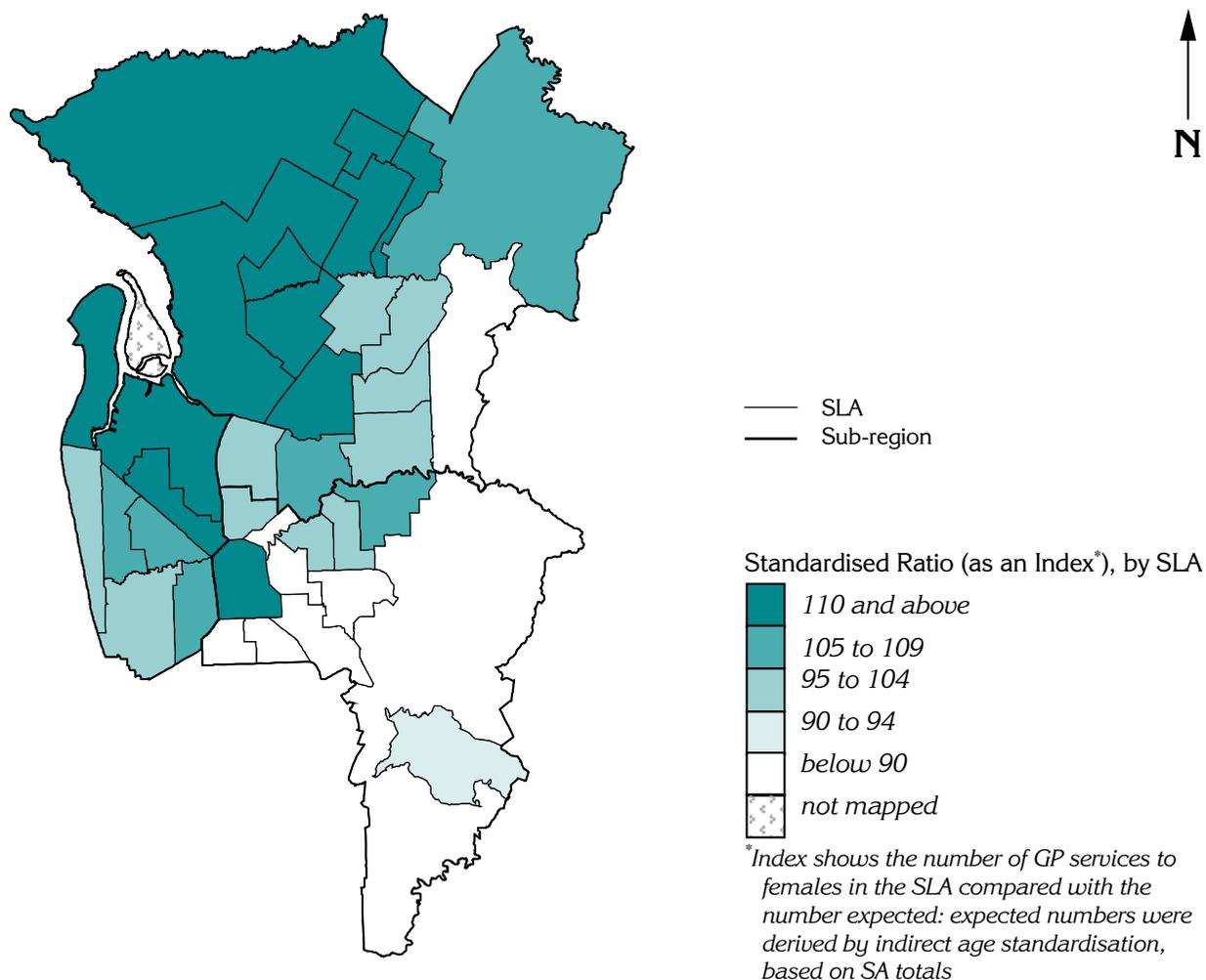


Table 83: GP services to females, CNAHS, 2002/03

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	373,130	87**
Quintile 2	418,832	103**
Quintile 3	536,568	107**
Quintile 4	435,052	110**
Quintile 5: most disadvantaged areas	567,003	122**
<b>Rate ratio</b>	<b>..</b>	<b>1.40**</b>
<b>Northern</b>	<b>1,005,256</b>	<b>113**</b>
<b>Western</b>	<b>686,964</b>	<b>109**</b>
<b>Central East</b>	<b>638,365</b>	<b>95**</b>
<b>CNAHS</b>	<b>2,330,668</b>	<b>107**</b>
<b>Southern</b>	<b>928,426</b>	<b>99**</b>
<b>Metropolitan regions</b>	<b>3,259,011</b>	<b>104**</b>
<b>State total</b>	<b>4,283,072</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Accident and Emergency department attendances

*Attendances at Accident and Emergency Departments of public acute hospitals in Adelaide (excl. Modbury Hospital), 2000/01*

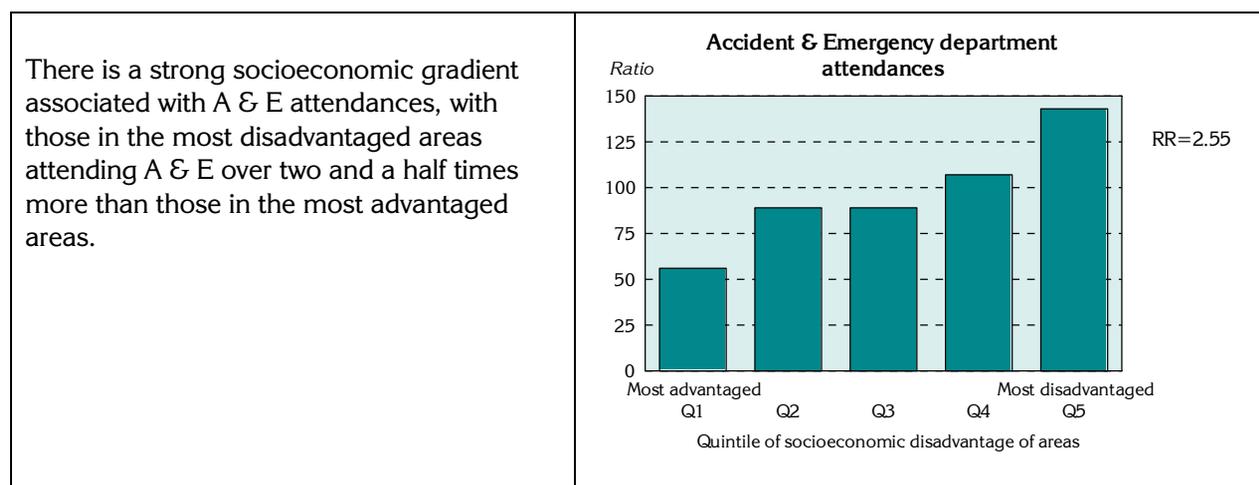
## Overview

**Public hospital Accident and Emergency (A & E) departments are accessible 24 hours a day, seven days a week, to provide acute and emergency care to patients arriving either by ambulance or by other means. While some people require immediate attention for life-threatening conditions or trauma, most require less urgent care. Timely access to care is a high priority for patients, health care providers and the public at large.**

There were slightly fewer A & E attendances recorded for residents of the Central Northern region than were expected from the State rates (an SR of 98\*\* and 202,008 attendances) (Table 84). The distribution of A & E attendances shows the highest standardised ratios (SRs) were largely located in SLAs in the north-western and northern parts of the region, as well as in the city (Map 82).

The number of A & E attendances in the SLA of Playford - Elizabeth was twice the number expected (an SR of 200\*\*), and the highest number of attendances of any SLA in the region (14,176 attendances). Highly elevated ratios were also recorded in the SLAs of Adelaide (an SR of 163\*\*), Playford - West Central (153\*\*), Salisbury - Inner North (150\*\*), and Salisbury - Central (141\*\*), 10,388).

Areas with more than 50% fewer attendances than expected included Adelaide Hills - Central (an SR of 35\*\*, 1,146 attendances), Burnside - North-East (47\*\*, 2,661), Adelaide Hills - Ranges (49, 1,249) and Burnside - South-West (49\*\*, 2,754).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 82: Accident and Emergency attendances, CNAHS, 2000/01

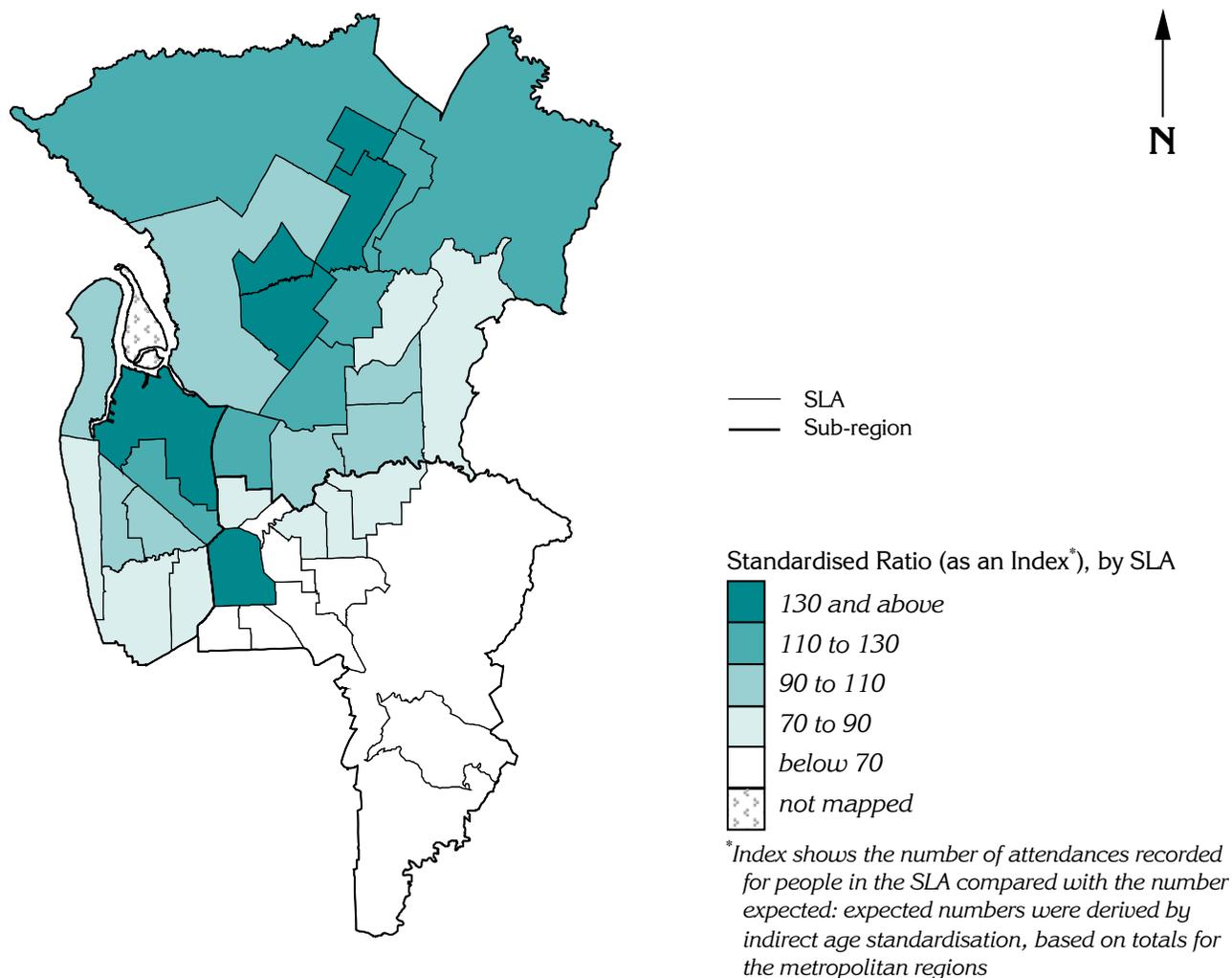


Table 84: Accident and Emergency attendances, CNAHS, 2000/01

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	21,102	56**
Quintile 2	34,154	89**
Quintile 3	40,998	89**
Quintile 4	40,401	107**
Quintile 5: most disadvantaged areas	65,353	143**
<b>Rate ratio</b>	<b>..</b>	<b>2.55**</b>
<b>Northern</b>	<b>105,662</b>	<b>119**</b>
<b>Western</b>	<b>55,731</b>	<b>98**</b>
<b>Central East</b>	<b>40,615</b>	<b>68**</b>
<b>CNAHS</b>	<b>202,008</b>	<b>98**</b>
<b>Southern</b>	<b>92,639</b>	<b>106**</b>
<b>Metropolitan regions</b>	<b>294,648</b>	<b>101**</b>
<b>State total</b>	<b>..</b>	<b>..</b>

\* indicates statistical significance: see page 19

# Outpatient department attendances

Attendances at outpatient departments of public acute hospitals in Adelaide (excl. Modbury Hospital): includes consultations with specialist medical practitioners and other providers, including those providing physical therapies, dietary advice, etc: data from 2003/04

The data for outpatient departments have been estimated to account for incomplete coverage of the OACIS dataset, from which the details of the patient's SLA and age was obtained. Consultations with both specialist medical practitioners and allied health professionals are included in these data.

## Overview

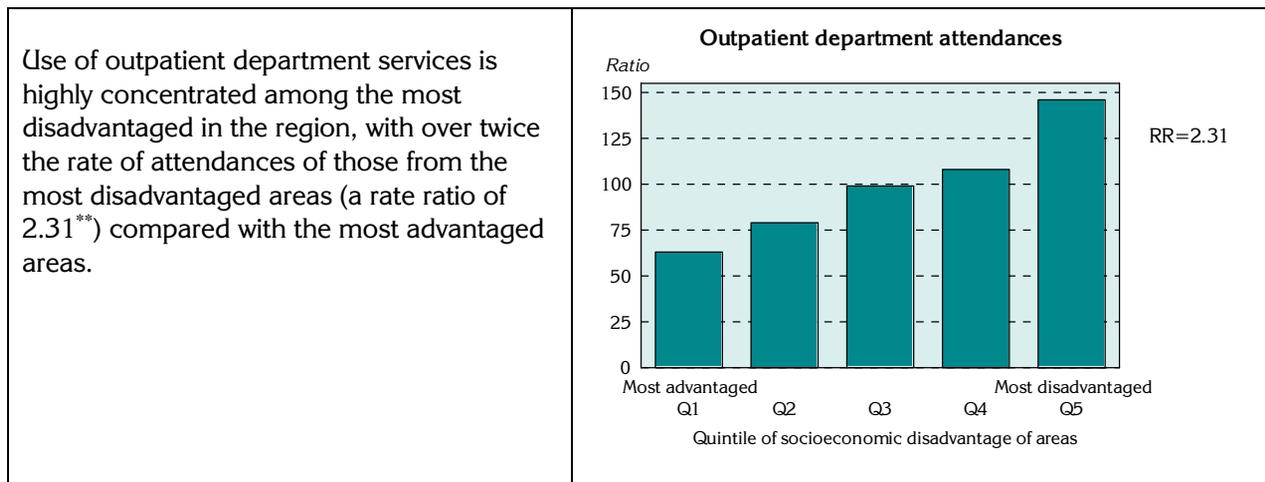
**Outpatient departments of public hospitals provide an important range of specialist medical and non-medical (allied) health services to the population, in particular to the most disadvantaged groups who do not have private health insurance and therefore have limited access to these services operating in private practice.**

Residents of Central Northern had 684,436 outpatient attendances in 2003/04 (a standardised ratio (SR) of 100) (Table 85). The SLAs with the most highly elevated standardised ratios (SRs) for outpatient department attendances were situated in a number of western, north-western and inner northern SLAs, and in the outer north, with very low ratios in the east (Map 83).

People in Port Adelaide Enfield - Port had 71% more attendances than expected (an SR of 171\*\*, 41,013 attendances), while those in Playford - Elizabeth (156\*\*, 36,482), - West Central (156\*\*, 15,032), and Charles Sturt - North-East (151\*\*, 35,624) all had over 50% more attendances than expected. There were also elevated ratios in Salisbury - Inner North (an SR of 146\*\*, 25,924 attendances), Port Adelaide Enfield - Coast (137\*\*, 35,128), Charles Sturt - Inner East (132\*\*, 27,546), Salisbury - Central (131\*\*, 29,380), Port Adelaide Enfield - Inner (122\*\*, 23,494), Playford - East Central (121\*\*, 17,555), West Torrens - East (121\*\*, 26,726) and Charles Sturt - Inner West (120\*\*, 29,049).

Large numbers of attendances were also recorded for people in the SLAs of Salisbury - South-East (29,608 attendances, 100), West Torrens - West (27,056, 92\*\*), Charles Sturt - Coastal (26,809, 88\*\*) and Port Adelaide Enfield - East (25,761, 96\*\*).

Fewer than half the expected number of outpatient attendances at public acute hospitals were recorded for Adelaide Hills - Central (an SR of 46\*\*, 4,904 attendances) and Tea Tree Gully - Hills (49\*\*, 5,121). Low ratios were also recorded in Burnside - North-East (52\*\*, 10,966), Walkerville (55\*\*, 3,874) and Burnside - South-West (59\*\*, 12,299).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 83: Outpatient department attendances, CNAHS, 2003/04

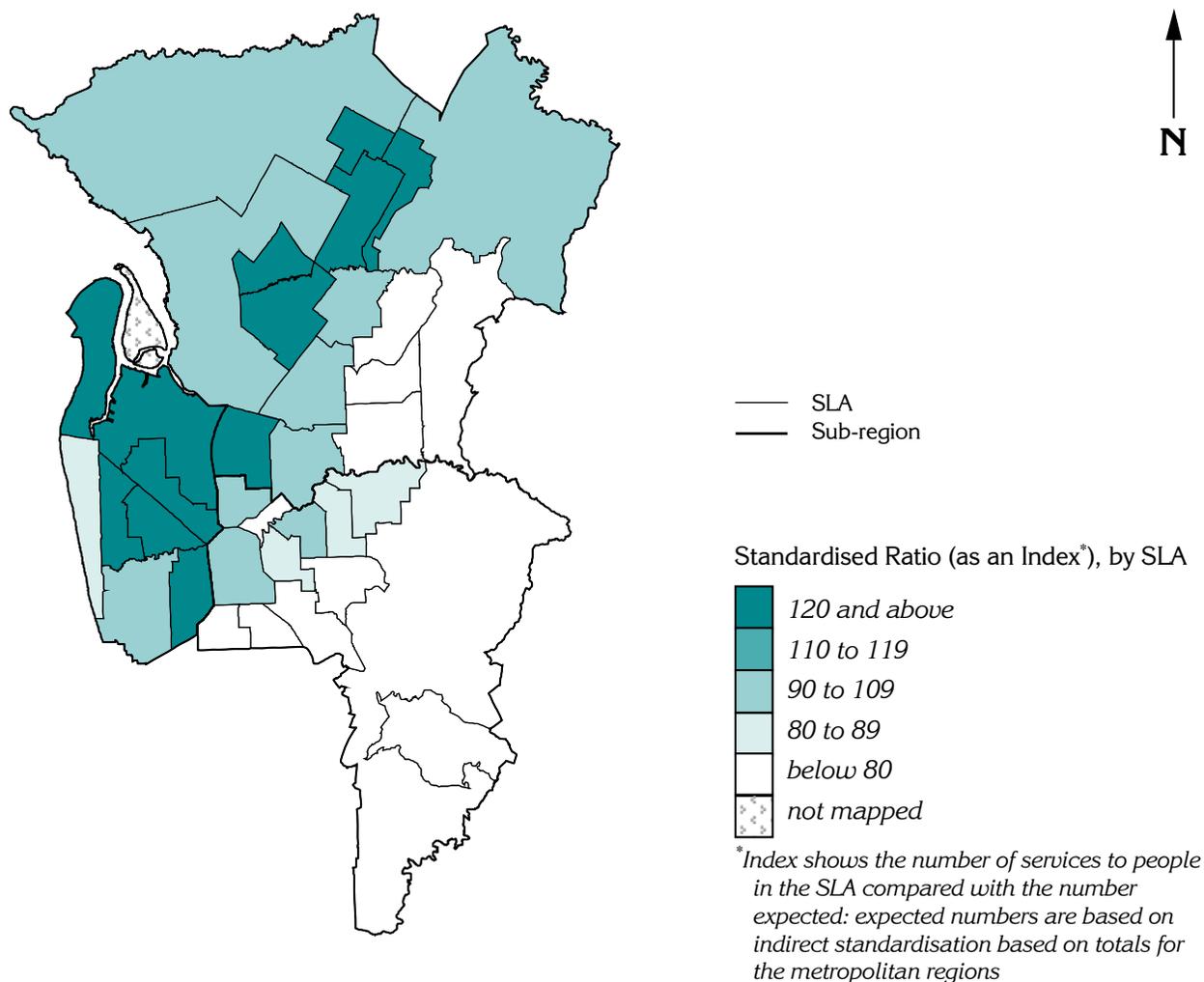


Table 85: Outpatient department attendances, CNAHS, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	82,319	63**
Quintile 2	98,339	79**
Quintile 3	156,542	99*
Quintile 4	135,679	108**
Quintile 5: most disadvantaged areas	211,557	146**
<b>Rate ratio</b>	..	<b>2.31**</b>
<b>Northern</b>	<b>283,572</b>	<b>103**</b>
<b>Western</b>	<b>248,951</b>	<b>124**</b>
<b>Central East</b>	<b>151,213</b>	<b>73**</b>
<b>CNAHS</b>	<b>684,436</b>	<b>100</b>
<b>Southern</b>	<b>296,842</b>	<b>101</b>
<b>Metropolitan regions</b>	<b>981,278</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Consultations<sup>4</sup> with specialist medical practitioners: in outpatient departments

*Consultations with specialist medical practitioners in outpatient departments of public acute hospitals in Adelaide (excl. Modbury Hospital): data from 2003/04. The data shown here include consultations with a specialist medical practitioner at an outpatient department of a public acute hospital. The data have been adjusted to account for incomplete coverage of the source dataset, as noted for the previous indicator.*

## Overview

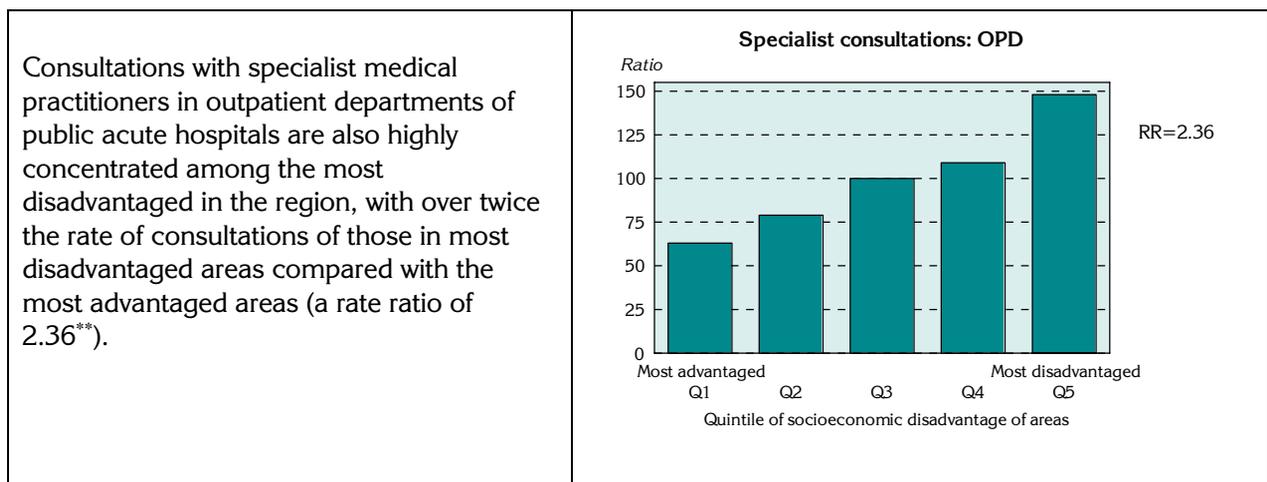
**Outpatient departments of public hospitals provide an important range of specialist medical services to the population, in particular to the most disadvantaged groups, who do not have private health insurance and therefore have limited access to these services operating in private practice.**

There were 619,881 consultations with specialists in hospital outpatient departments in 2003 to 2004 (a standardised ratio (SR) of 101\*\*) (Table 86). The most highly elevated ratios for specialist consultations in outpatient departments were located in the west, north-west and outer-north of the region, with low ratios from the city centre to the east, north-east and south-east (Map 84). This pattern was consistent with the pattern of socioeconomic disadvantage shown in Map 23 (page 113).

Port Adelaide Enfield - Port had 73% more consultations than expected (an SR of 173\*\*, 37,352 consultations). Other SLAs with highly elevated ratios included Playford - Elizabeth (158\*\*, 33,076) and - West Central (158\*\*, 33,076), Charles Sturt - North-East (153\*\*, 32,411), Salisbury - Inner North (147\*\*, 23,528), Port Adelaide Enfield - Coast (139\*\*, 32,095), Charles Sturt - Inner East (134\*\*, 2,5067), Salisbury - Central (134\*\*, 27,047), Port Adelaide Enfield - Inner (124\*\*, 21,279), Charles Sturt - Inner West (122\*\*, 26,516), West Torrens - East (122\*\*, 24,038) and Playford - East Central (122\*\*, 15,931).

Large numbers of specialist consultations in outpatient departments were recorded for residents of Salisbury - South-East (27,269 consultations, an SR of 103\*\*), West Torrens - West (24,320, 92), Port Adelaide Enfield - East (23,356, 97\*\*), Salisbury - North-East (15,339, 95\*\*), Prospect (13,923, 92\*\*) and Norwood Payneham and St Peters - East (13,817, 93\*\*).

SLAs with approximately half the number of consultations expected included Adelaide Hills - Central (an SR of 45\*\*, 4,309 consultations), Tea Tree Gully - Hills (49\*\*, 4,613) and Burnside - North-East (52\*\*, 9,757). Low ratios were also calculated for Walkerville (an SR of 54\*\*, 3,412 consultations), Burnside - South-West (58\*\*, 10,742), Adelaide Hills - Ranges (60\*\*, 4,459), Tea Tree Gully - North (62\*\*, 11,202), - Central (63\*\*, 12,076) and - South (65\*\*, 17,246), Unley - East (71\*\*, 11,560) and - West (78\*\*, 10,487).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

<sup>4</sup> A 'consultation' may include a number of services eg. an examination, minor surgical procedures, etc.  
244

\* indicates statistical significance: see page 19

Map 84: Specialist medical consultations in outpatient departments, CNAHS, 2003/04

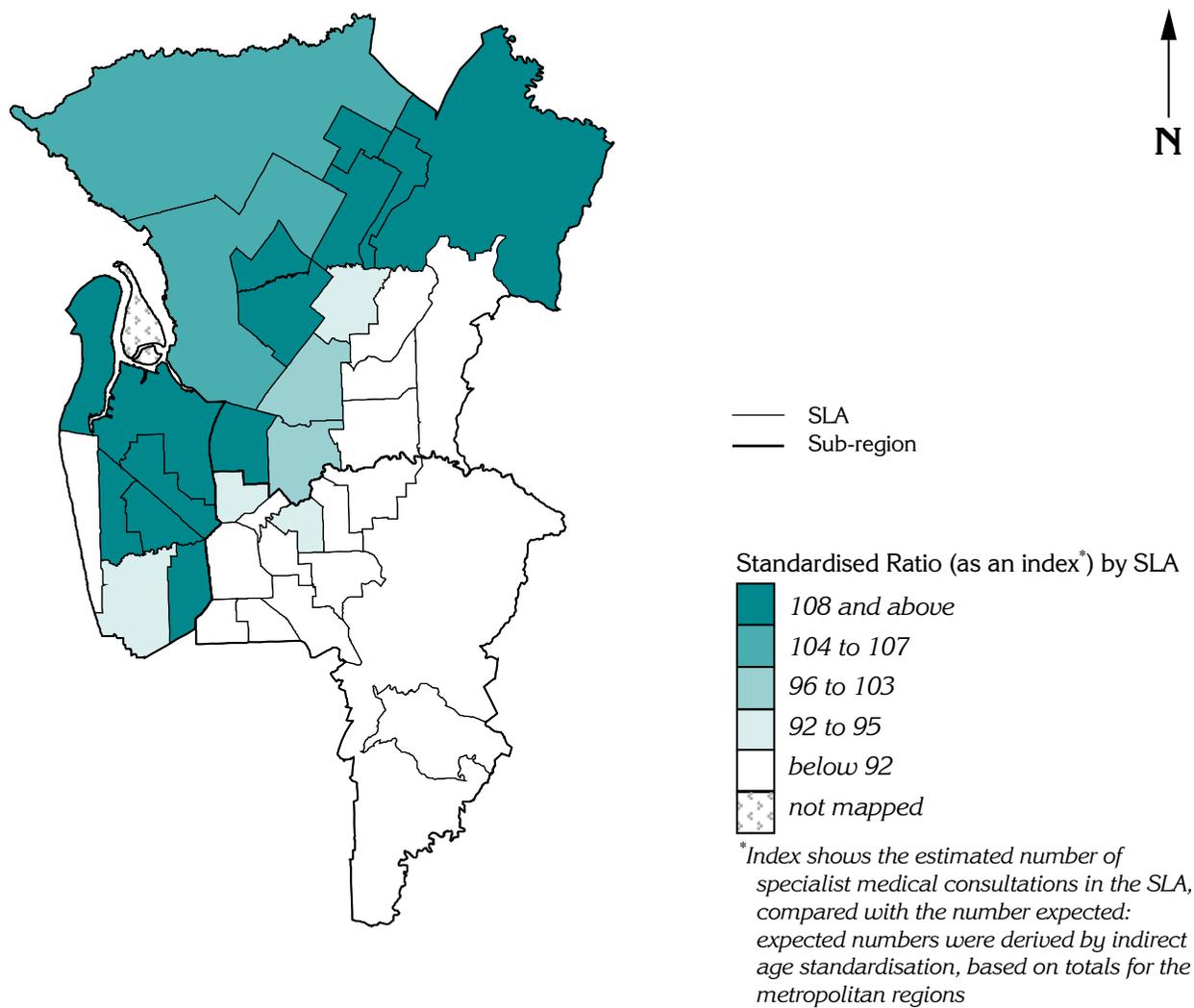


Table 86: Specialist medical consultations in outpatient departments, CNAHS, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	73,120	63**
Quintile 2	88,963	79**
Quintile 3	141,426	100
Quintile 4	123,898	109**
Quintile 5: most disadvantaged areas	192,474	148**
<b>Rate ratio</b>	<b>..</b>	<b>2.36**</b>
<b>Northern</b>	<b>258,355</b>	<b>104**</b>
<b>Western</b>	<b>225,953</b>	<b>126**</b>
<b>Central East</b>	<b>135,573</b>	<b>73**</b>
<b>CNAHS</b>	<b>619,881</b>	<b>101**</b>
<b>Southern</b>	<b>264,896</b>	<b>100</b>
<b>Metropolitan regions</b>	<b>884,777</b>	<b>101</b>

\* indicates statistical significance: see page 19

# Consultations<sup>5</sup> with specialist medical practitioners: under Medicare

Consultations with specialist medical practitioners, billed through Medicare, 2000/01. The data shown here include consultations with a specialist medical practitioner, in the private practitioner's rooms (whether at a hospital, or not), billed through Medicare Australia (formerly HIC).

## Overview

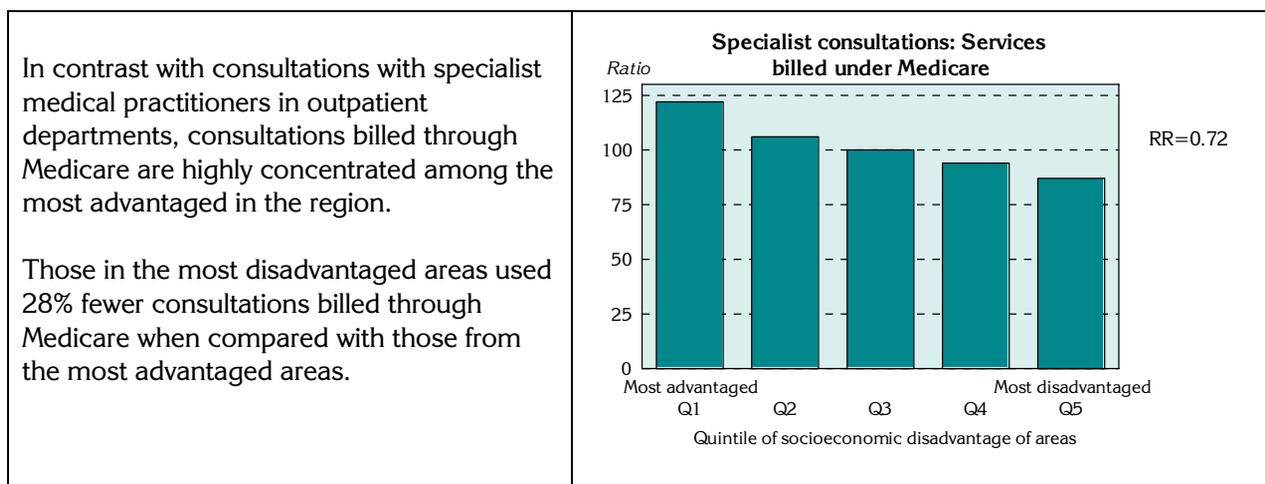
**Specialist medical practitioners in private practice provide a wide range of health services to the population.**

In 2000/01, 881,104 consultations with specialist medical practitioners were billed through Medicare for residents of the Central Northern region, a standardised ratio (SR of 101) (Table 87). Private consultations were concentrated in a band of SLAs across Adelaide, comprising the higher socioeconomic status SLAs (Map 85).

The most highly elevated ratios, with approximately one-third more specialist consultations under Medicare than expected, included Adelaide (an SR of 133\*\*, 20,441 consultations, possibly including consultations for which the patient address was not accurately recorded), Burnside - South-West (133\*\*, 34,151), Unley - East (132\*\*, 29,813), Walkerville (131\*\*, 11,506) and Norwood Payneham and St Peters - West (131\*\*, 26,625). There were also highly elevated ratios in Burnside - North-East (an SR of 127\*\*, 33,511 consultations), Unley - West (118\*\*, 22,658), Prospect (117\*\*, 24,910), Adelaide Hills - Central (112\*\*, 15,853), Charles Sturt - Coastal (110\*\*, 42,529) and Norwood Payneham and St Peters - East (110\*\*, 22,193).

Large numbers of specialist consultations under Medicare were mapped in West Torrens - West (38,635 consultations, an SR of 107\*\*), Tea Tree Gully - South (36,660, 97\*\*), Salisbury - South-East (34,878, 90\*\*), Campbelltown - East (32,010, 101\*\*), Charles Sturt - Inner West (31,134, 103\*\*), Port Adelaide Enfield - Coast (29,383, 90\*\*), West Torrens - East (28,329, 103\*\*), Charles Sturt - Inner East (26,458, 102\*\*), Tea Tree Gully - Central (25,886, 91\*\*) and - North (25,627, 96\*\*).

SLAs with fewer specialist consultations under Medicare than expected included Salisbury Balance (an SR of 74\*\*, 4,390 consultations), Port Adelaide Enfield - Port (76\*\*, 22,879), - Inner (85\*\*, 19,880) and - East (87\*\*, 29,533), Playford - Hills (85\*\*, 2,654) and - Elizabeth (87\*\*, 25,316), Charles Sturt - North-East (88\*\*, 25,991) and Salisbury - Central (89\*\*, 25,726).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

<sup>5</sup> A 'consultation' may include a number of services eg. an examination, minor surgical procedures, etc. Variations in the number of services billed per patient are unlikely to affect these geographic comparisons.

Map 85: Specialist medical consultations under Medicare, CNAHS, 2000/01

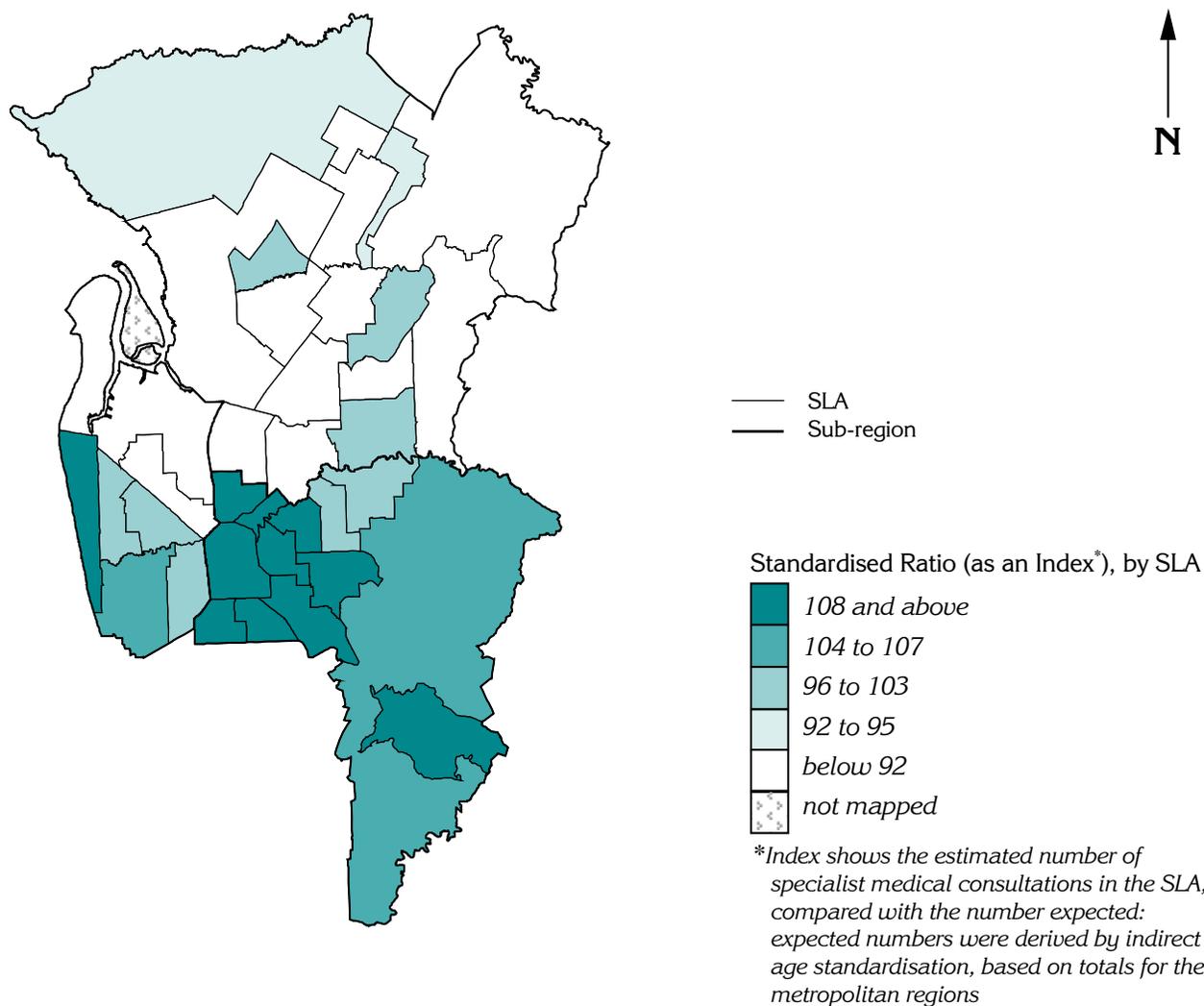


Table 87: Specialist medical consultations under Medicare, CNAHS, 2000/01

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	200,874	122**
Quintile 2	171,402	106**
Quintile 3	197,633	100
Quintile 4	151,581	94**
Quintile 5: most disadvantaged areas	159,613	87**
<b>Rate ratio</b>	..	<b>0.72**</b>
<b>Northern</b>	<b>235,900</b>	<b>91**</b>
<b>Western</b>	<b>245,337</b>	<b>98**</b>
<b>Central East</b>	<b>309,867</b>	<b>119**</b>
<b>CNAHS</b>	<b>881,104</b>	<b>101</b>
<b>Southern</b>	<b>364,439</b>	<b>97</b>
<b>Metropolitan regions</b>	<b>1,245,554</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Consultations<sup>6</sup> with specialist medical practitioners: in outpatient departments and under Medicare

*Consultations with specialist medical practitioners in outpatient departments of public acute hospitals (excl. Modbury) in Adelaide and consultations with specialist medical practitioners in their private practice (whether at a hospital, or not). Data from 2003/04 (outpatient departments) and 2000/01 (Medicare)*

## Overview

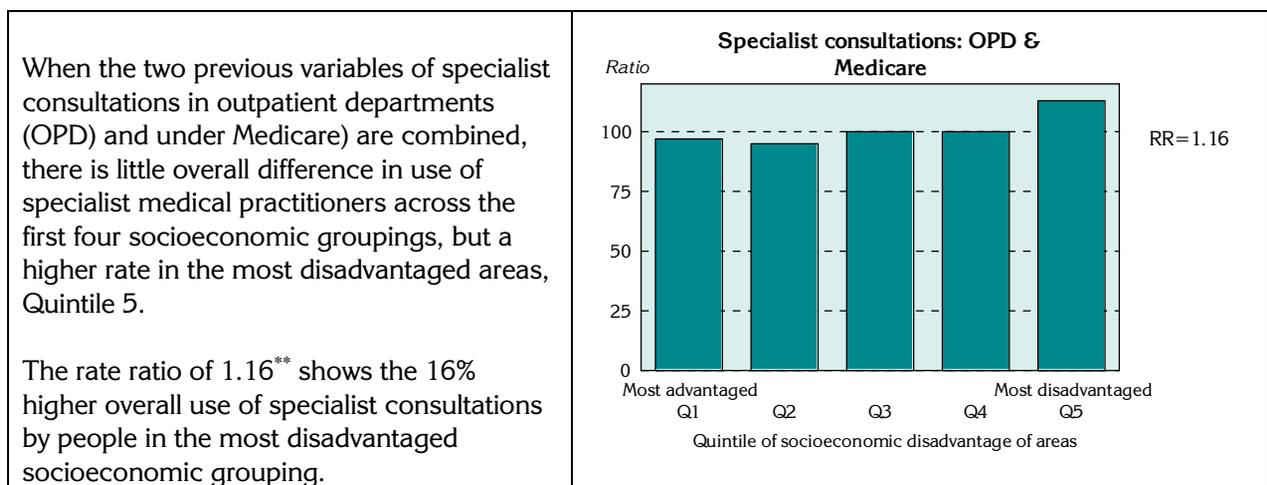
**These data provide an overview of the combined delivery of services to the population by specialist medical practitioners.**

There was a total of 1,500,985 specialist medical practitioner consultations in Central Northern in 2003/04 (a standardised ratio (SR) of 101\*\*) (Table 88). The SLAs with the most highly elevated ratios included those with greater socioeconomic disadvantage (Map 86), in contrast with the distribution of consultations billed through Medicare (Map 85). The contrasting pattern highlights the importance for the disadvantaged of access to specialists through public hospitals.

The most highly elevated ratio was in Salisbury - Inner North, with 20% more consultations than expected from the State rates (an SR of 120\*\*, 47,521 consultations): these would include numbers of homeless and other indigent people. Other SLAs with elevated ratios included Playford - West Central (118\*\*, 25,050) and - Elizabeth (117\*\*, 58,392), Port Adelaide Enfield - Port (117\*\*, 60,231), Adelaide (116\*\*, 30,211), Charles Sturt - Inner-East (115\*\*, 51,525), - North-East (115\*\*, 58,402) and - Inner-West (111\*\*, 57,650), West Torrens - East (111\*\*, 52,367), Port Adelaide Enfield - Coast (110\*\*, 61,478) and Norwood Payneham and St Peters - West (110\*\*, 38,145).

Relatively large numbers of consultations were provided to people living in Charles Sturt - Coastal (66,683, 101\*), West Torrens - West (62,955, 101), Salisbury - South-East (62,147, 95\*\*) and - Central (52,773, 107\*\*), and Campbelltown - East (49,838, 93\*\*).

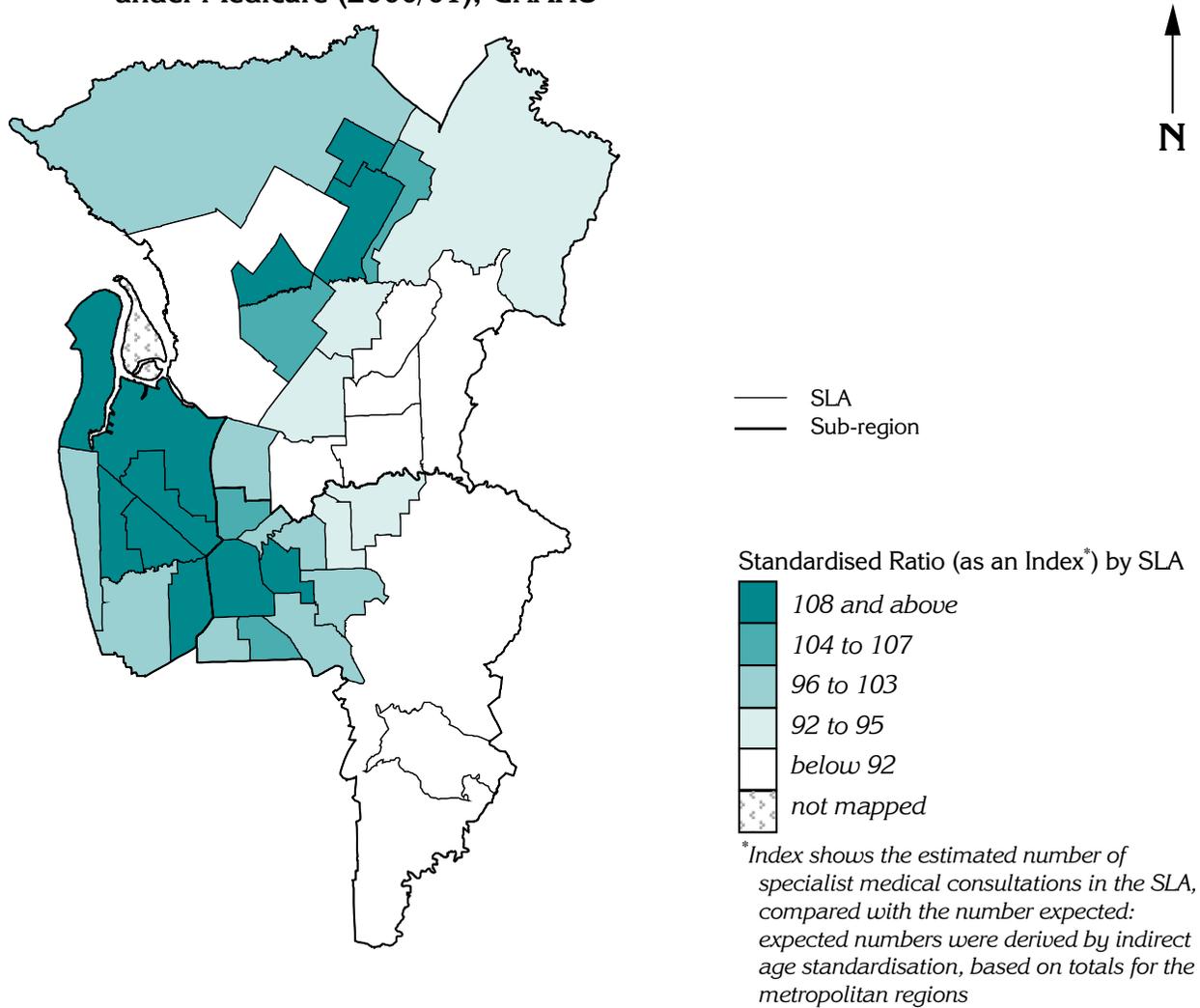
There were low ratios throughout Tea Tree Gully with 26% fewer consultations than expected in Tea Tree Gully - Hills (an SR of 74\*\*, 17,214) followed by - Central (80\*\*, 37,962), - North (82\*\*, 36,829), and - South (84\*\*, 53,906). There were also low ratios in Adelaide Hills - Central (85\*\*, 20,162), Salisbury Balance (86\*\*, 8,561), Adelaide Hills - Ranges (86\*\*, 15,959) and Port Adelaide Enfield - East (91\*\*, 52,889).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

<sup>6</sup> A 'consultation' may include a number of services eg. an examination, minor surgical procedures, etc. Variations in the number of services per patient billed under Medicare are unlikely to affect these geographic comparisons.

**Map 86: Specialist medical consultations in outpatient departments (2003/04) and under Medicare (2000/01), CNAHS**



**Table 88: Specialist medical consultations in outpatient departments (2003/04) and under Medicare (2000/01), CNAHS**

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	273,994	97**
Quintile 2	260,365	95**
Quintile 3	339,059	100
Quintile 4	275,479	100
Quintile 5: most disadvantaged areas	352,087	113**
<b>Rate ratio</b>	<b>..</b>	<b>1.16**</b>
Northern	584,255	96**
Western	471,290	109**
Central East	445,440	100
<b>CNAHS</b>	<b>1,500,985</b>	<b>101**</b>
Southern	296,842	99
<b>Metropolitan regions</b>	<b>2,130,321</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Access to private health services: Private health insurance

Estimated number of people with private health insurance cover, June 2001

## Overview

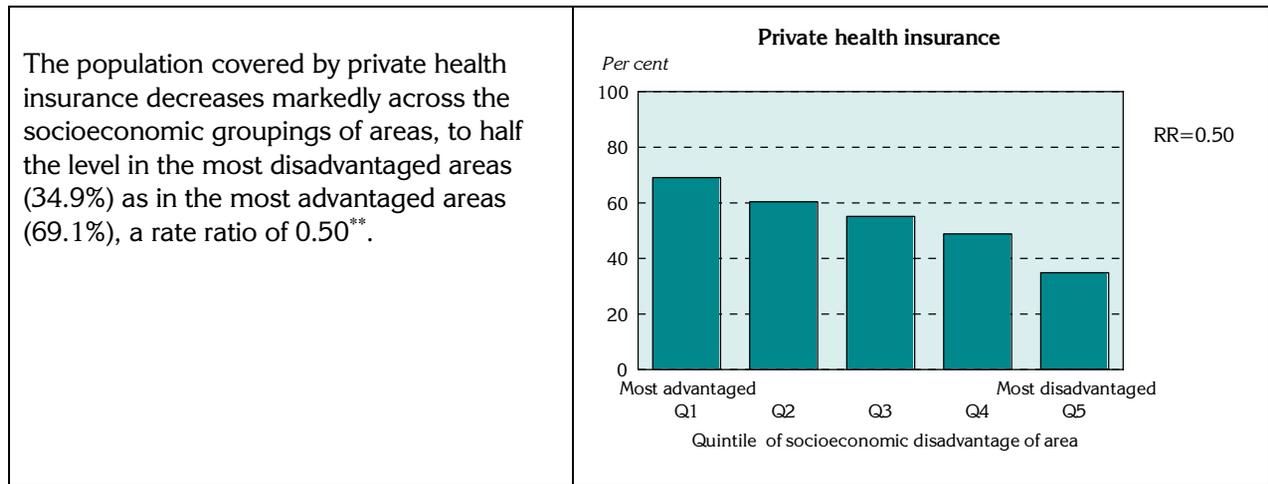
**Having private health insurance increases the range of health services that can be accessed, both in-hospital services and services provided by medical and dental practitioners, psychologists, physiotherapists etc.**

There were 393,238 people with private health insurance in Central Northern, 53.1% of the population in the region (Table 89). The highest rates of private health insurance coverage were generally in the more advantaged SLAs to the east and south-east of the city (Map 87).

Approximately three quarters of the populations in the SLAs of Adelaide Hills - Central (76.4%, 9,345 people), Burnside - North-East (76.2%, 15,026) and Burnside - South-West (73.4%, 14,785) had private health insurance. There were also high proportions in the SLAs of Walkerville (71.9%, 4,920 people), Adelaide Hills - Ranges (69.3%, 7,576), Charles Sturt - Coastal (68.4%, 20,669) and Unley - East (68.2%, 13,075).

There were large numbers of insured residents in the SLAs of Tea Tree Gully - South (20,229 people, 61.5%), Campbelltown - East (17,313, 66.3%) and West Torrens - West (16,508, 59.7%).

The SLAs with the lowest rates of cover were Playford - Elizabeth (30.0%, 8,152 people), Port Adelaide Enfield - Port (31.0%, 7,791), Playford - West Central (32.4%, 4,098), Salisbury Balance (32.4%, 1,473), Salisbury - Central (36.3%, 9,781), Salisbury - Inner North (37.1%, 8,782), Adelaide (37.1%, 6,629), Port Adelaide Enfield - Inner (37.7%, 7,350) and Playford - East Central (38.0%, 6,017), Charles Sturt - North-East (40.0%, 9,715 people), Playford - West (41.2%, 3,251), Playford - Hills (41.5%, 1,111) and Port Adelaide Enfield - East (43.0%, 11,718).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 87: Private health insurance, CNAHS, June 2001

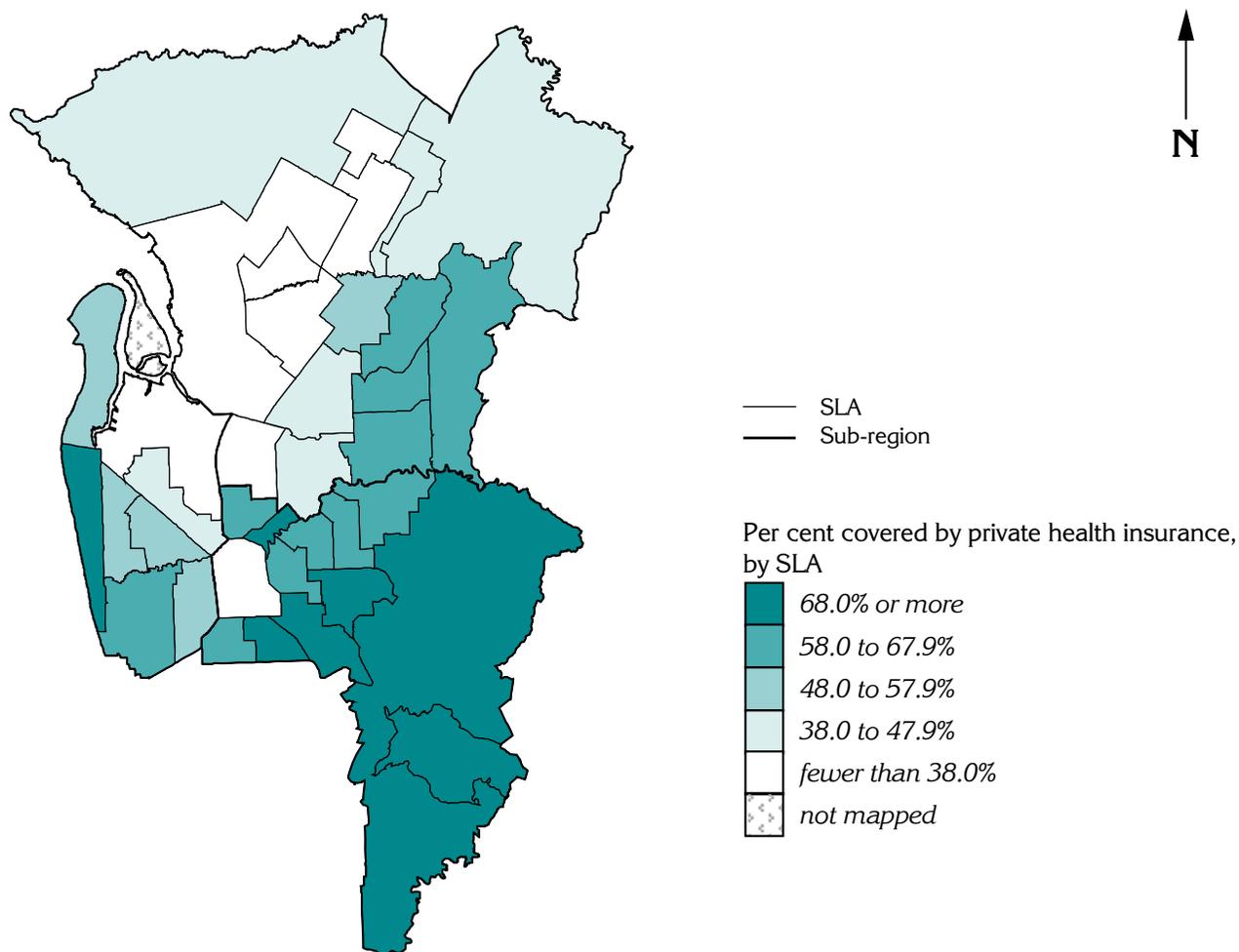


Table 89: Private health insurance, CNAHS, June 2001

Area	Number	Per cent
<b>CNAHS</b>		
Quintile 1: most advantaged areas	94617	69.1
Quintile 2	87009	60.4
Quintile 3	88808	55.1
Quintile 4	65662	48.8
Quintile 5: most disadvantaged areas	57142	34.9
<b>Rate ratio</b>	..	<b>0.50**</b>
Northern	148,175	46.4
Western	104,420	51.5
Central East	140,644	64.4
<b>CNAHS</b>	<b>393,238</b>	<b>53.1</b>
Southern	179,967	57.4
Metropolitan regions	573,205	54.4
State total	754,551	51.4

Source: Senate Community Affairs Legislation Committee, Answers To Estimates Questions On Notice, Health And Ageing Portfolio, Supplementary Budget Estimates 2002-2003, 21 November 2002, Question: E02-060

\* indicates statistical significance: see page 19

# Hospital admissions: admissions of people to public acute and private hospitals

Admission to public acute and private hospitals (including same day centres) in South Australia of residents of the CNAHS: includes same day admissions, other than for renal dialysis: data from 2003/04

## Overview

**Patients are usually admitted to hospital either as an emergency or as a booked admission. Emergency admission patients are admitted through the A & E Department. These are seriously injured or ill patients who need immediate treatment. Most patients come into hospital as a booked admission, either as a day patient or an inpatient. A day patient comes to hospital for a test or treatment and returns home the same day. They usually will not stay overnight. An inpatient stays overnight or for a few days at the hospital.**

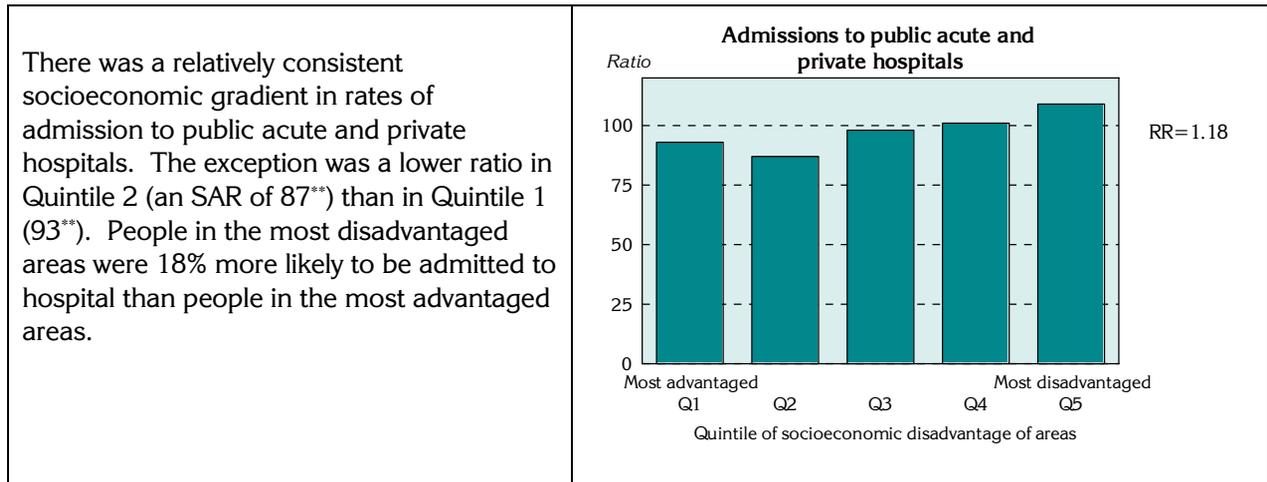
The rate of admissions of the population of the Central Northern region was two per cent lower than expected (a standardised admission ratio (SAR) of 98\*\*), with 255,027 admissions (Table 90). The most highly elevated ratios were located in the outer SLAs of the north, east and west (Map 88).

The near-average ratio for the region is comprised of both very high and very low ratios, ranging from an SAR of 162\*\* (1,435 admissions) for residents of Playford - Hills, to an SAR of 70\*\* (4,529 admissions) for those in Prospect; this is a wide range, from 62% above to 30% below average.

Other elevated ratios in the region were recorded for people living in the SLAs of Salisbury Balance (an SAR of 161\*\*, 2,768); Adelaide Hills - Ranges (128\*\*, 4,033), Playford - Elizabeth (119\*\*, 10,493) West Torrens - West (114\*\*, 12,706), Playford - West Central (111\*\*, 4,085) and - West (110\*\*, 2,771), Port Adelaide Enfield - Coast (109\*\*, 10,668), Charles Sturt - Inner East (108\*\*, 8,500) and - North-East (108\*\*, 9,680), Salisbury - Inner North (108\*\*, 7,393) and Port Adelaide Enfield - Inner (107\*\*, 7,782).

Large numbers of admissions were recorded for people in the SLAs of Tea Tree Gully - South (11,379 admissions, an SAR of 101), Salisbury - South-East (10,977, 97\*\*), Port Adelaide Enfield - East (10,666, 104\*\*), Charles Sturt - Coastal (10,655, 92\*\*) and - Inner West (9,517, 104\*\*), Port Adelaide Enfield - Port (9,077, 100) and Salisbury - Central (8,719, 101).

In addition to the lowest SAR, in Prospect (70\*\*, 4,529 admissions), low ratios were also found for people in Playford - East Central (an SAR of 73\*\*, 4,070 admissions), West Torrens - East (77\*\*, 6,510), Burnside - North-East (79\*\*, 6,294), Tea Tree Gully - Central (81\*\*, 6,635), Campbelltown - East (83\*\*, 7,713), Walkerville (85\*\*, 2,278), Unley - East (88\*\*, 6,180) and Norwood Payneham and St Peters - West (89\*\*, 5,515).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 88: Admissions of people to public acute and private hospitals, CNAHS, 2003/04

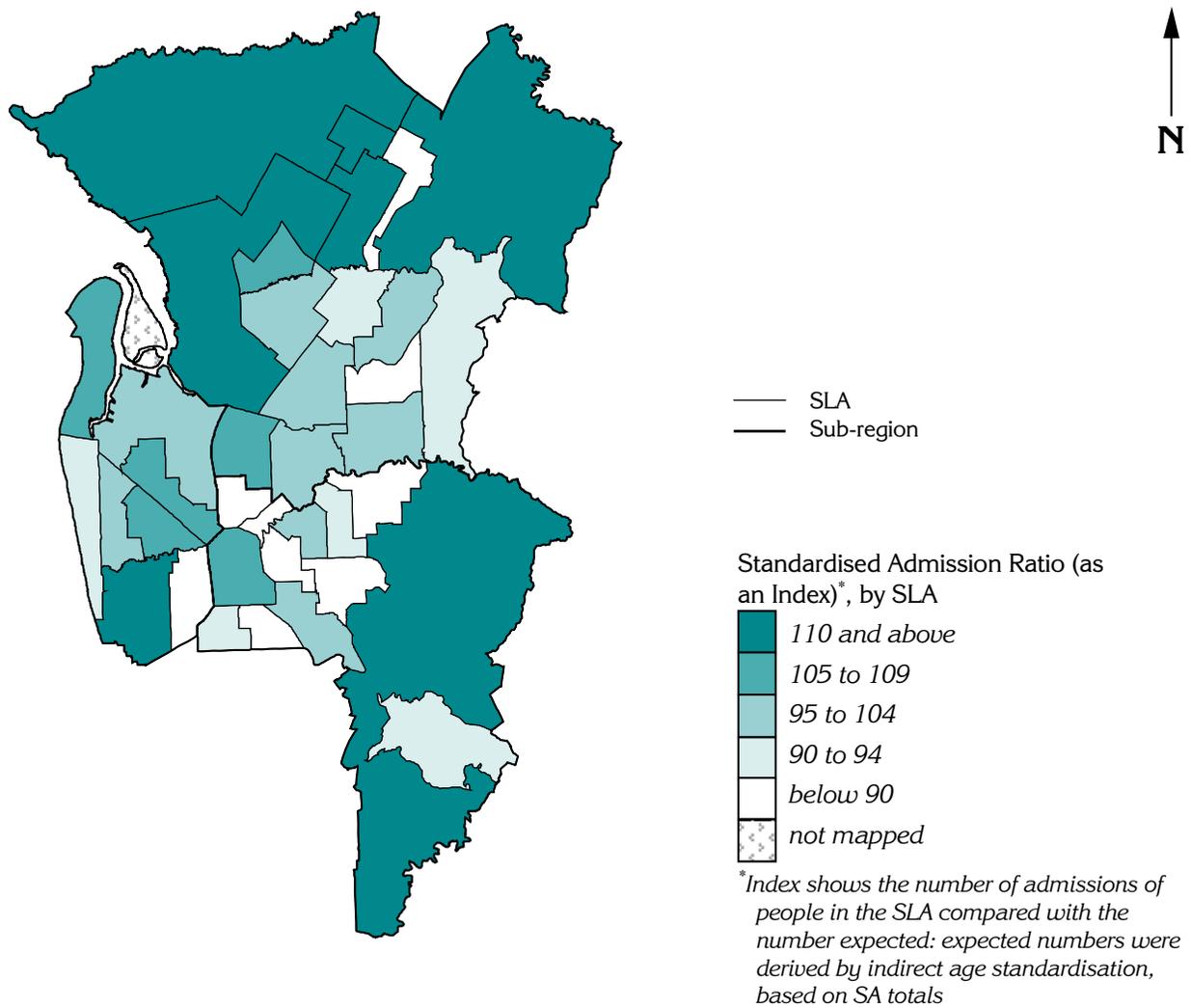


Table 90: Admissions of people to public acute and private hospitals, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	46,176	93**
Quintile 2	41,740	87**
Quintile 3	58,500	98**
Quintile 4	48,614	101**
Quintile 5: most disadvantaged areas	59,997	109**
<b>Rate ratio</b>	<b>..</b>	<b>1.18**</b>
<b>Northern</b>	<b>106,297</b>	<b>101**</b>
<b>Western</b>	<b>77,313</b>	<b>102**</b>
<b>Central East</b>	<b>71,417</b>	<b>90**</b>
<b>CNAHS</b>	<b>255,027</b>	<b>98**</b>
<b>Southern</b>	<b>113,114</b>	<b>101**</b>
<b>Metropolitan regions</b>	<b>368,141</b>	<b>99**</b>
<b>State total</b>	<b>514,985</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Hospital admissions: admissions of people to public acute hospitals

Admission to public acute hospitals in South Australia of residents of the CNAHS: includes same day admissions, other than for renal dialysis: data from 2003/04

## Overview

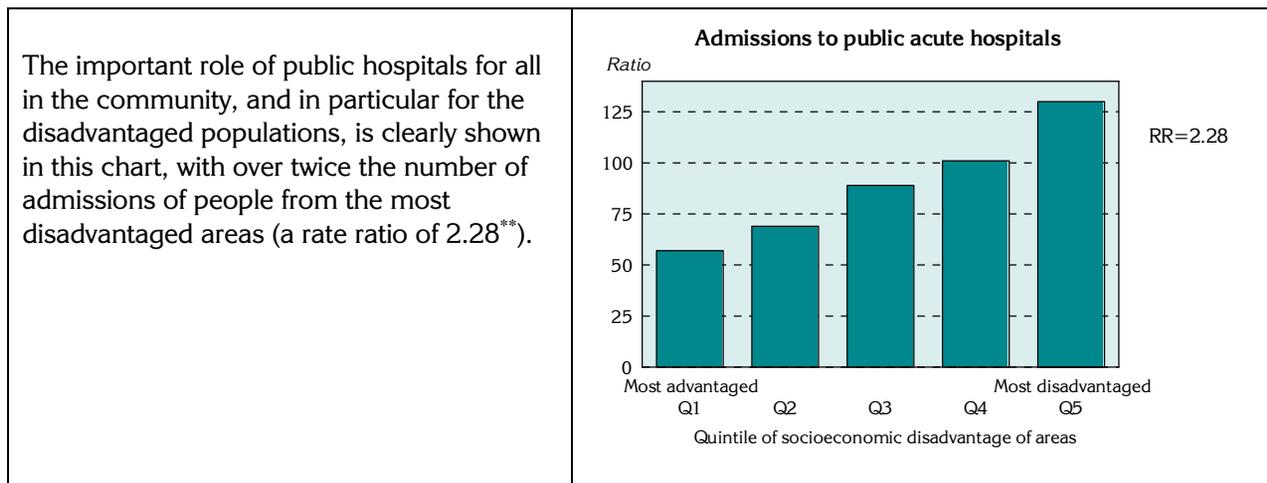
**Patients are usually admitted to public acute hospitals either as an emergency or as a booked admission. Emergency admission patients are admitted through the A & E Department. These are seriously injured or ill patients who need immediate treatment. Most patients come into public acute hospitals as a booked admission, either as a day patient or an inpatient.**

Residents of the Central Northern region had ten per cent fewer public acute hospital admissions than expected from the State rates (a standardised admission ratio (SAR) of 90\*\*, 150,520) (Table 91). This near-average ratio is comprised of both highly elevated and very low ratios, over a range from 79% above average (Salisbury Balance) to 61% below average (Burnside - North-East). The map (Map 89) shows a striking separation between areas with the highest and those with the lowest ratios. Just as striking is a comparison with the map of socioeconomic disadvantage (Map 23, page 113).

In addition to the highly elevated ratio in Salisbury Balance (an SAR of 179\*\*, 2,036 admissions), other SLAs with highly elevated ratios included Playford - West Central (155\*\*, 3,758) and - Elizabeth (151\*\*, 8,596), Port Adelaide Enfield - Port (131\*\*, 7,634), Charles Sturt - North-East (126\*\*, 7,275). Salisbury - Central had a less highly elevated ratio (an SAR of 118\*\*, 6,576 admissions).

SLAs with a large number of admissions include Salisbury - South-East (7,842 admissions, an SAR of 108\*\*), Port Adelaide Enfield - Coast (6,942, 112\*\*), Tea Tree Gully - South (6,798, 95\*\*), Port Adelaide Enfield - East (6,569, 100), Charles Sturt - Inner West (5,582, 96\*\*) and Port Adelaide Enfield - Inner (5,345, 114\*\*).

A large number of SLAs in Central Northern had very low SARs, including Burnside - North-East (an SAR of 39\*\*, 1,962 admissions), Walkerville (49\*\*, 824), Adelaide Hills - Central (50\*\*, 1,282), Burnside - South-West (51\*\*, 2,518), Prospect (55\*\*, 2,300), Campbelltown - East (61\*\*, 3,625), Playford - Hills (61\*\*, 347), Unley - West (61\*\*, 2,278), Adelaide Hills - Ranges (63\*\*, 1,252), Unley - East (63\*\*, 2,862), Charles Sturt - Coastal (66\*\*, 4,849), Norwood Payneham and St Peters - West (70\*\*, 2,814), Tea Tree Gully - Central (70\*\*, 3,682), West Torrens - East (73\*\*, 3,985), Tea Tree Gully - Hills (75\*\*, 1,884), Norwood Payneham and St Peters - East (77\*\*, 3,130), Tea Tree Gully - North (82\*\*, 4,066), West Torrens - West (82\*\*, 5,808) and Campbelltown - West (84\*\*, 4,001).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 89: Admissions of people to public acute hospitals, CNAHS, 2003/04

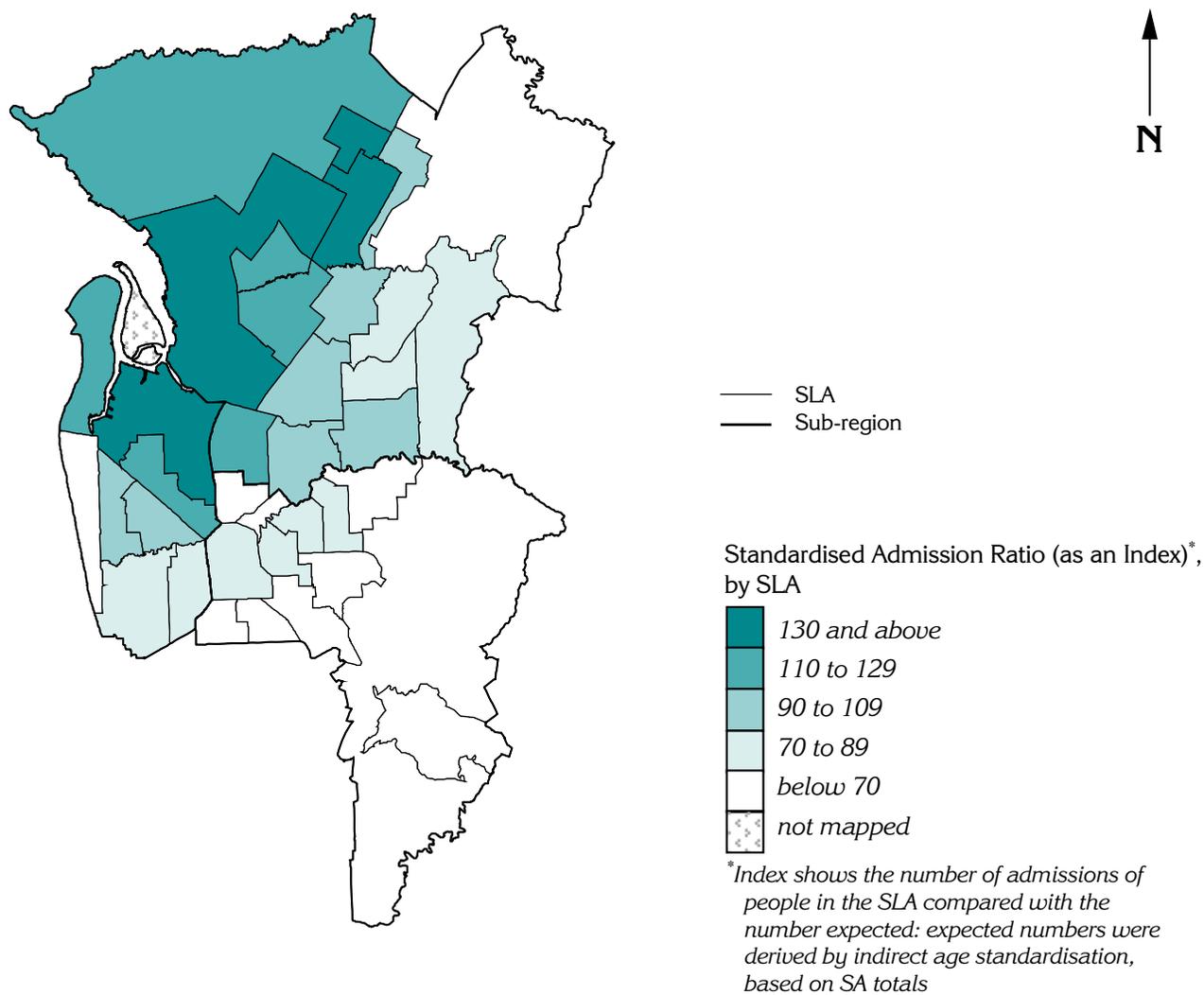


Table 91: Admissions of people to public acute hospitals, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	18,023	57**
Quintile 2	21,227	69**
Quintile 3	34,016	89**
Quintile 4	30,931	101
Quintile 5: most disadvantaged areas	46,323	130**
<b>Rate ratio</b>	<b>..</b>	<b>2.28**</b>
Northern	71,716	106**
Western	47,251	97**
Central East	31,553	63**
<b>CNAHS</b>	<b>150,520</b>	<b>90**</b>
Southern	63,240	88**
Metropolitan regions	213,760	90**
State total	329,441	100

\* indicates statistical significance: see page 19

# Hospital admissions: admissions of people to private hospitals

Admission to private hospitals in South Australia of residents of the CNAHS: includes same day admissions, other than for renal dialysis: data from 2003/04

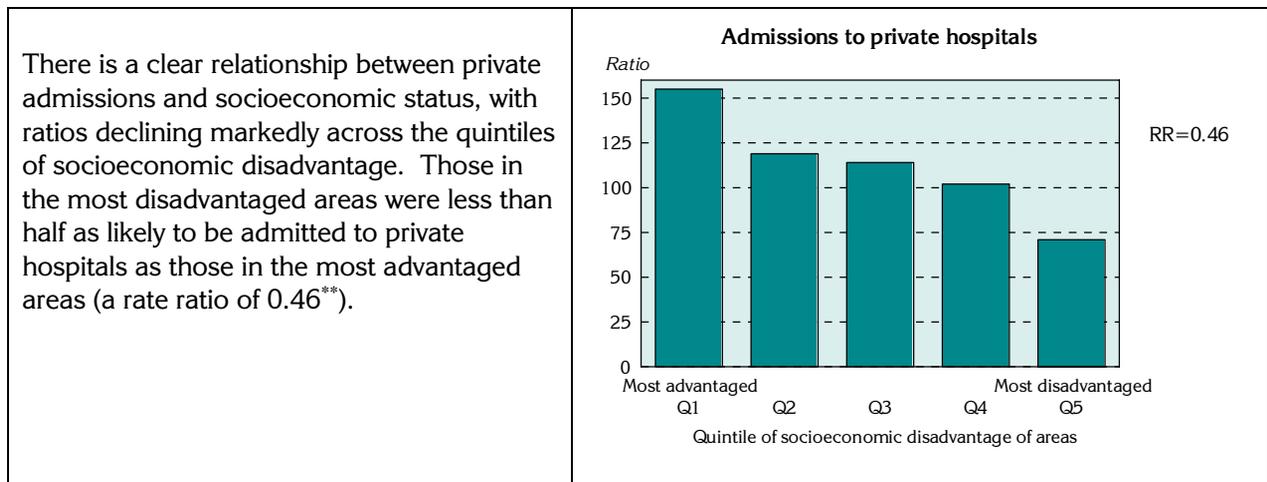
## Overview

**Patients are admitted to hospital as an emergency or as a booked admission. Most patients come into private hospitals as a booked admission, either as a day patient or an inpatient. The majority of admitted patients have private health insurance to cover all or a majority of the cost of their hospital episode.**

Residents of Central Northern region had an admission rate to private hospitals 12% above the State average (an SAR of 112\*\* and 104,507 admissions) (Table 92). The highest rate of use of private hospitals was mapped (Map 90) in one SLA in the outer north-east (Playford - Hills), in the city and adjacent inner SLAs, as well as throughout SLAs to the east, south-east and outer west.

A large number of SLAs in the region had very highly elevated ratios. Playford - Hills had nearly three and a half times the expected number of admissions to private hospitals (an SAR of 340\*\*, 1,088 admissions). Other SLAs with very highly to highly elevated ratios included Adelaide Hills - Ranges (237\*\*, 2,781), Burnside - South-West (175\*\*, 5,095), West Torrens - West (171\*\*, 6,898), Adelaide Hills - Central (161\*\*, 2,426), Unley - West (152\*\*, 3,186), Burnside - North-East (147\*\*, 4,332) and Walkerville (147\*\*, 1,454). Highly elevated ratios were also mapped in Charles Sturt - Coastal (an SAR of 135\*\*, 5,806 admissions), Norwood Payneham and St Peters - East (134\*\*, 3,035), Unley - East (133\*\*, 3,318), Adelaide (132\*\*, 2,218), Salisbury Balance (125\*\*, 732), Norwood Payneham and St Peters - West (122\*\*, 2,701), Campbelltown - East (120\*\*, 4,088), Tea Tree Gully - North (120\*\*, 3,219) and - Hills (119\*\*, 1,772), Charles Sturt - Inner West (118\*\*, 3,935) and - Inner East (117\*\*, 3,324).

In contrast, just one quarter of the expected number of admissions to private hospitals were recorded for residents of Playford - West Central (an SAR of 26\*\*, 327 admissions). Other SLAs with low SARs included Playford - East Central (an SAR of 38\*\*, 718 admissions), Port Adelaide Enfield - Port (44\*\*, 1,443), Playford - Elizabeth (61\*\*, 1,897), Salisbury - Central (71\*\*, 2,143), Charles Sturt - North-East (75\*\*, 2,405), Salisbury - South-East (77\*\*, 3,135) and West Torrens - East (85\*\*, 2,525).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 90: Admissions of people to private hospitals, CNAHS, 2003/04

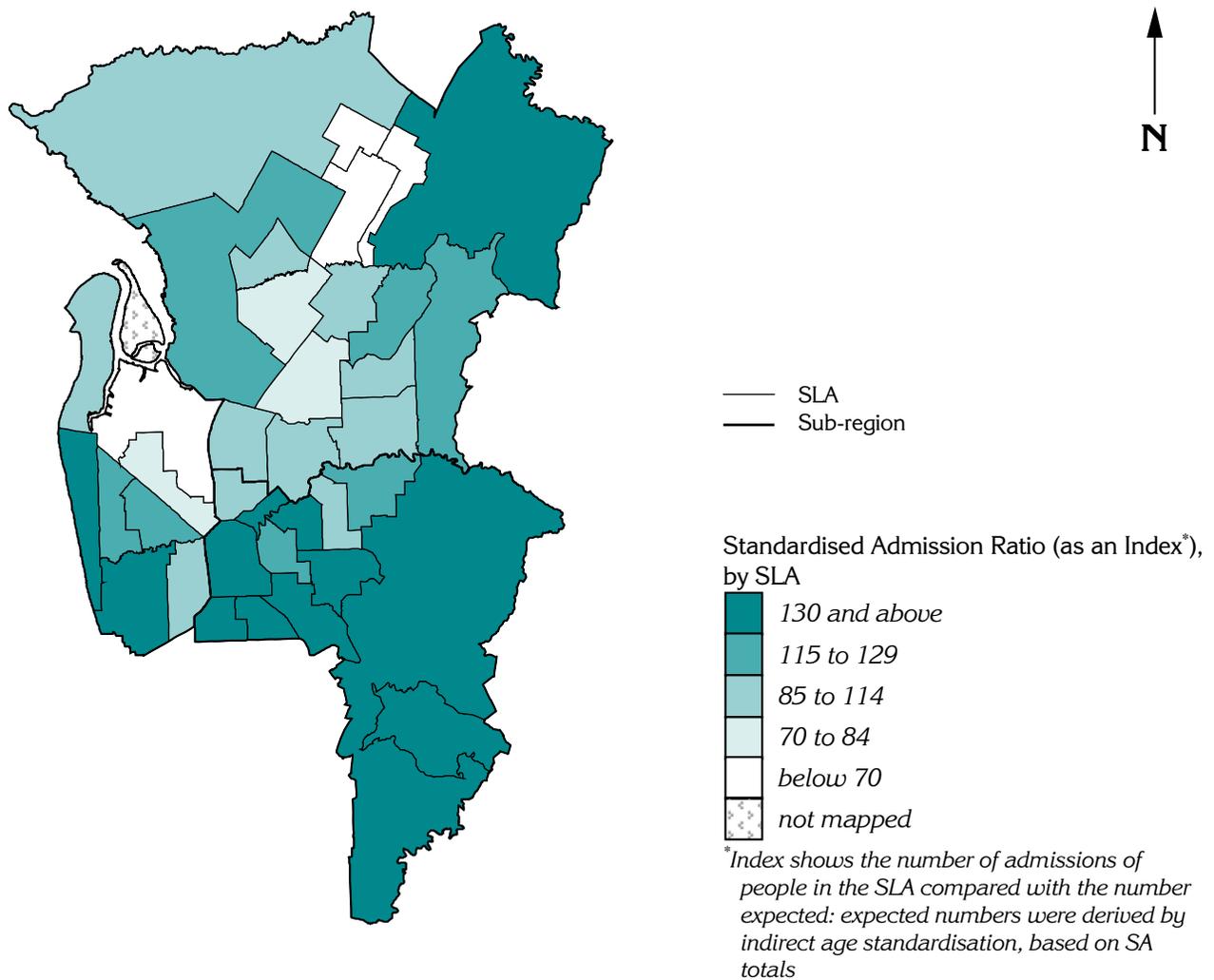


Table 92: Admissions of people to private hospitals, CNAHS, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	28,153	155**
Quintile 2	20,513	119**
Quintile 3	24,484	114**
Quintile 4	17,683	102**
Quintile 5: most disadvantaged areas	13,674	71**
<b>Rate ratio</b>	..	<b>0.46**</b>
<b>Northern</b>	<b>34,581</b>	<b>93**</b>
<b>Western</b>	<b>30,062</b>	<b>109**</b>
<b>Central East</b>	<b>39,864</b>	<b>139**</b>
<b>CNAHS</b>	<b>104,507</b>	<b>112**</b>
<b>Southern</b>	<b>49,874</b>	<b>123**</b>
<b>Metropolitan regions</b>	<b>154,381</b>	<b>115**</b>
<b>State total</b>	<b>185,544</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Hospital Admissions: admissions of males

Admission to hospital of male residents of the CNAHS: includes same day admissions, other than for renal dialysis: data from 2003/04

## Overview

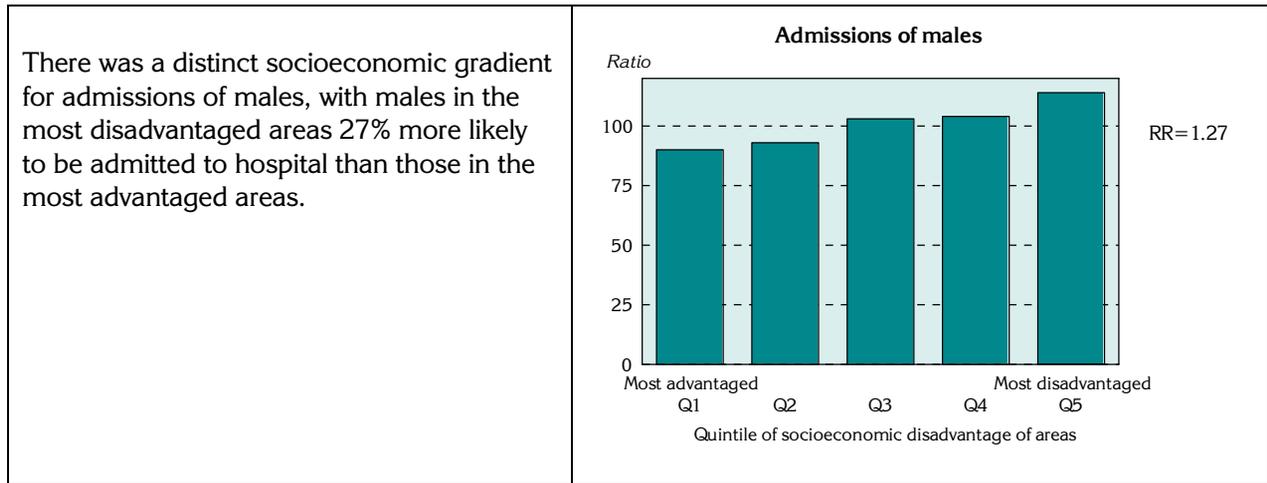
**See note to earlier variables.**

There were 134,863 admissions of males living in Central Northern, two per cent fewer than expected from the State rates (a standardised admission ratio (SAR) of 101\*\*) (Table 93). SARs in the region ranged from 41% above to 30% below the State average. There was no consistent pattern of high rates of male admissions to hospital in the Central Northern region. The most highly elevated ratios were mapped in a number of SLAs, generally in outer areas (Map 91).

The most highly elevated ratios were in Salisbury Balance (an SAR of 141\*\*, 1,132 admissions), followed by Playford - Hills (137\*\*, 584), Adelaide Hills - Ranges (127\*\*, 1,916), West Torrens - West (119\*\*, 5,898), Playford - Elizabeth (114\*\*, 4,468) and - West (113\*\*, 1,368) and Adelaide (112\*\*, 2,383).

Large numbers of admissions were recorded for males resident in Tea Tree Gully - South (5,120 admissions, an SAR of 102), Charles Sturt - Coastal (4,911, 92\*\*), Salisbury - South-East (4,796, 94\*\*), Port Adelaide Enfield - Coast (4,770, 108\*\*) and - East (4,734, 104\*), Charles Sturt - North-East (4,349, 109\*\*) and - Inner West (4,349, 105\*\*) and Port Adelaide Enfield - Port (4,131, 102).

The SLAs with fewer admissions of males than expected included Playford - East Central an SAR of (70\*\*, 1,710 admissions), Prospect (71\*\*, 1,974), West Torrens - East (79\*\*, 2,934), West Torrens - East (79\*\*, 2,934), Burnside - North-East (79\*\*, 2,760), Campbelltown - East (79\*\*, 3,354), Tea Tree Gully - Central (80\*\*, 2,942), Salisbury - North-East (86\*\*, 2,681), Walkerville (88\*\*, 1,042) and Unley - East (88\*\*, 2,513).



**Note:** In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 91: Admissions of males, CNAHS, 2003/04

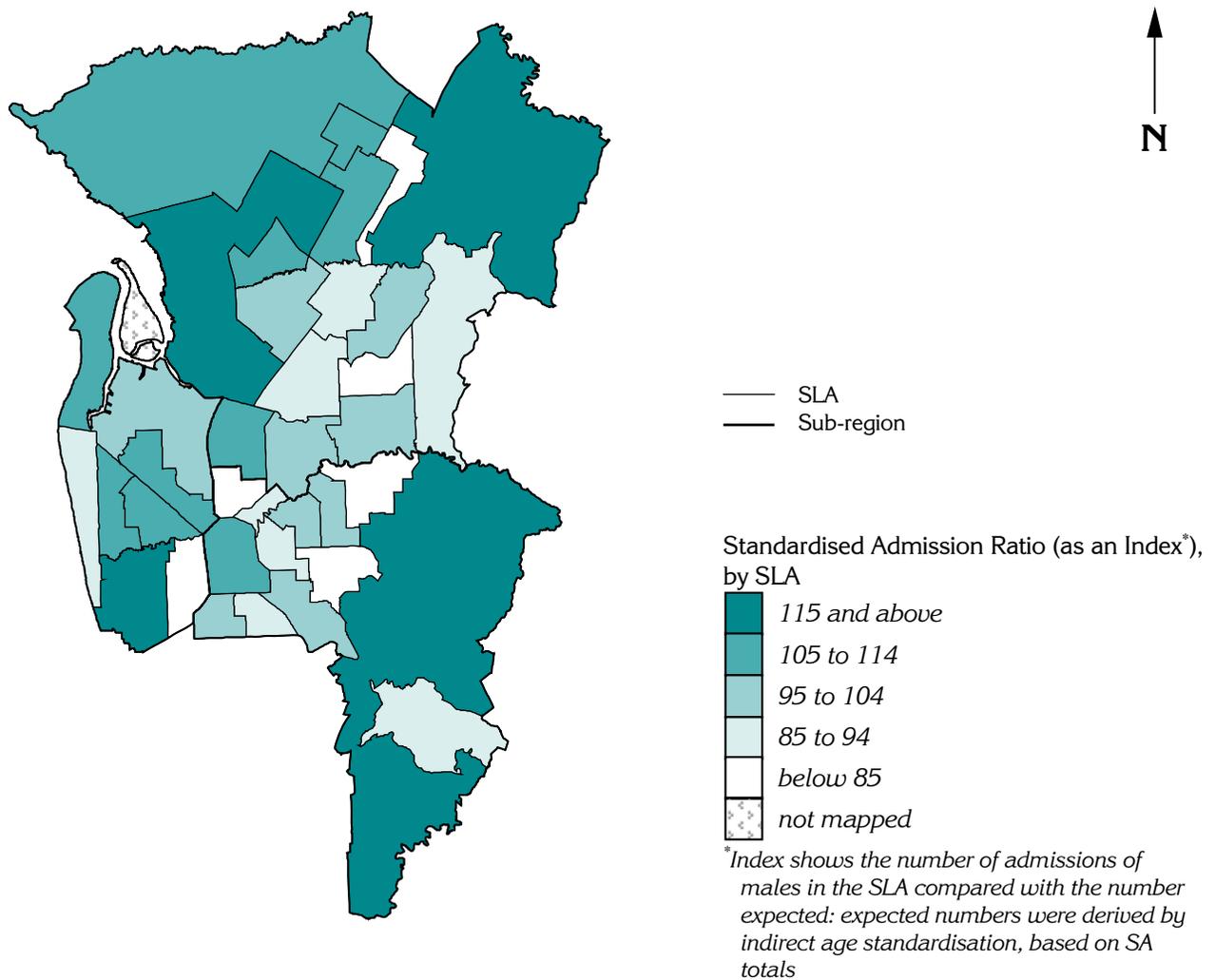


Table 93: Admissions of males, CNAHS, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	20,136	93**
Quintile 2	18,742	87**
Quintile 3	26,206	99
Quintile 4	21,663	100
Quintile 5: most disadvantaged areas	26,257	107**
<b>Rate ratio</b>		<b>1.15</b>
<b>Northern</b>	<b>46,591</b>	<b>99**</b>
<b>Western</b>	<b>35,077</b>	<b>103**</b>
<b>Central East</b>	<b>31,336</b>	<b>91**</b>
<b>CNAHS</b>	<b>113,004</b>	<b>98**</b>
<b>Southern</b>	<b>50,201</b>	<b>101</b>
<b>Metropolitan regions</b>	<b>163,205</b>	<b>99**</b>
<b>State total</b>	<b>232,461</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Hospital Admissions: admission of females

Admission to hospital of female residents of the CNAHS: includes same day admissions, other than for renal dialysis: data from 2003/04

## Overview

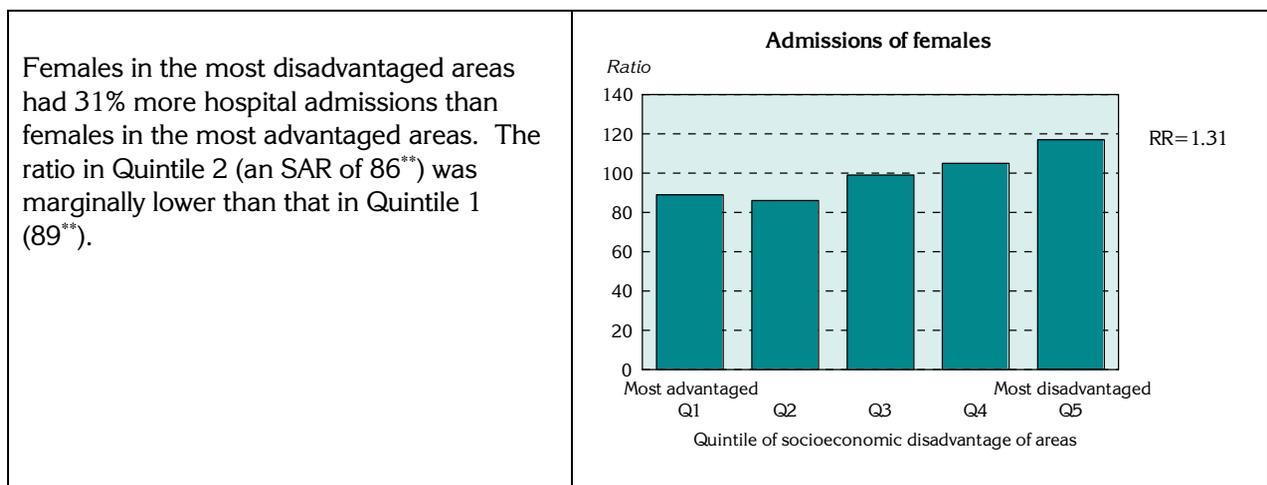
*See note to earlier variables.*

There were 155,846 admissions of females from the Central Northern region, two per cent fewer than expected (an SAR of 100) (Table 94). SARs in the region ranged from a highly elevated 83% above the State average, to 30% below. The most highly elevated ratios for admissions of females were mapped in the outer SLAs of the region, in the east, west and north. Below average ratios were mapped in the north-east and inner city SLAs (Map 92).

The most highly elevated ratio was in Playford - Hills (an SAR of 183\*\*, 851 admissions), followed by Salisbury Balance (178\*\*, 1,636), Adelaide Hills - Ranges (127\*\*, 2,117), Playford - Elizabeth (124\*\*, 6,025) and Playford - West Central (116\*\*, 2,306). SLAs with 10% more admissions than expected included Charles Sturt - Inner East (110\*\*, 4,765), Port Adelaide Enfield - Inner (110\*\*, 4,428) and - Coast (110\*\*, 5,898) and West Torrens - West (110\*\*, 6,808).

Large numbers of admissions were recorded in the SLAs of Tea Tree Gully - South (6,259 admissions, an SAR of 101), Salisbury - South-East (6,181, 99), Port Adelaide Enfield - East (5,932, 105\*\*), Charles Sturt - Coastal (5,744, 91\*\*) and Charles Sturt - North-East (5,331, 107\*\*).

A number of SLAs in the region had fewer admissions of females than expected from the State rates, including Prospect (70\*\*, 2,555), Playford - East Central (an SAR of 76\*\*, 2,360 admissions), West Torrens - East (76\*\*, 3,576), Burnside - North-East (79\*\*, 3,534), Tea Tree Gully - Central (82\*\*, 3,693), Walkerville (83\*\*, 1,236), Campbelltown - East (85\*\*, 4,359), Norwood Payneham and St Peters - West (88\*\*, 3,189) and Unley - East (88\*\*, 3,667).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 92: Admission of females, CNAHS, 2003/04

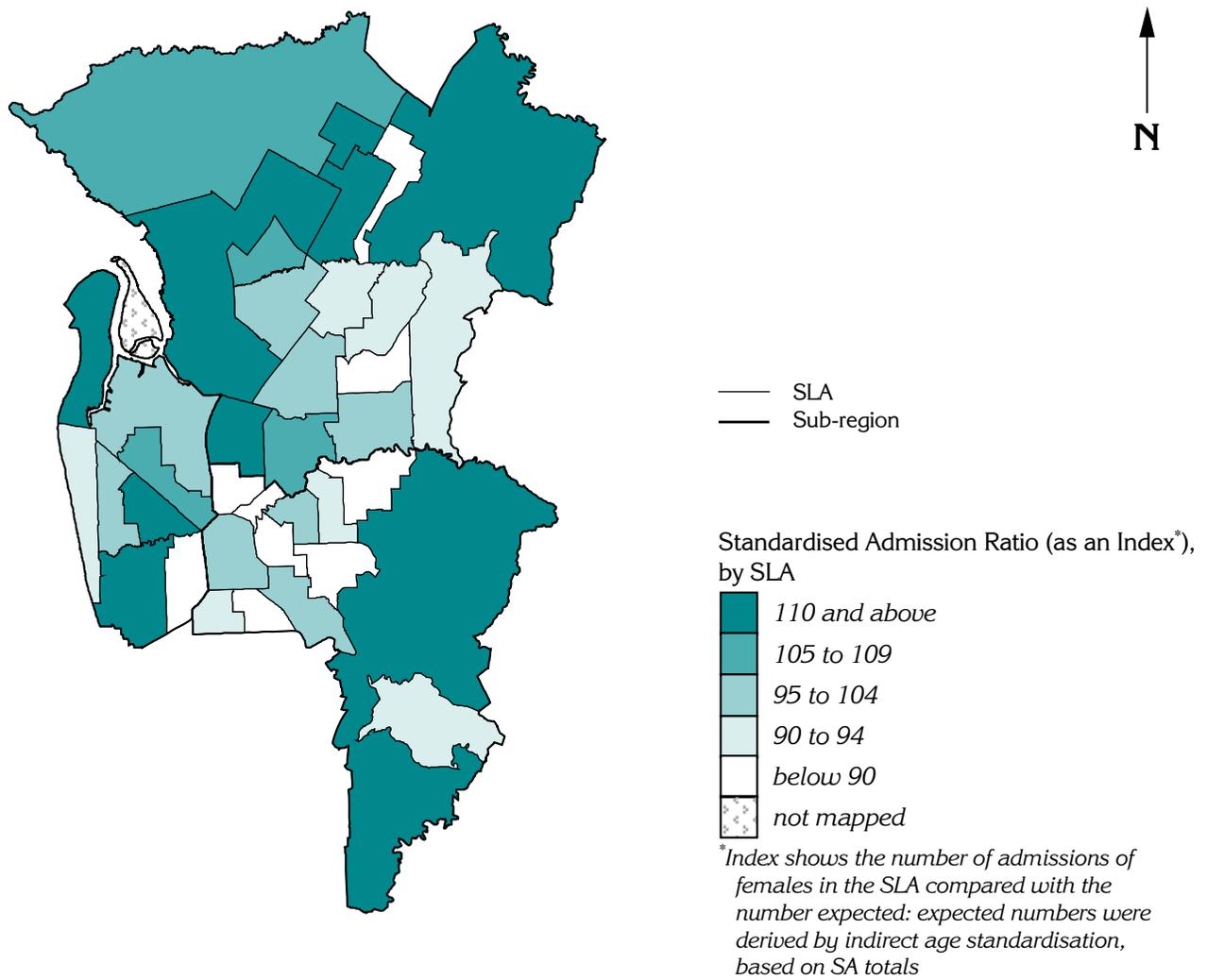


Table 94: Admission of females, CNAHS, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	26,040	93**
Quintile 2	22,998	87**
Quintile 3	32,294	97**
Quintile 4	26,951	102**
Quintile 5: most disadvantaged areas	33,740	111**
<b>Rate ratio</b>		<b>1.20</b>
Northern	59,706	103**
Western	42,236	101
Central East	40,081	90**
<b>CNAHS</b>	<b>142,023</b>	<b>98**</b>
<b>Southern</b>	<b>62,913</b>	<b>101*</b>
Metropolitan regions	204,936	99**
State total	282,524	100

\* indicates statistical significance: see page 19

# Hospital Admissions: admissions for myringotomy

Admission of children, living in the CNAHS, for a myringotomy: data from 2003/04

## Overview

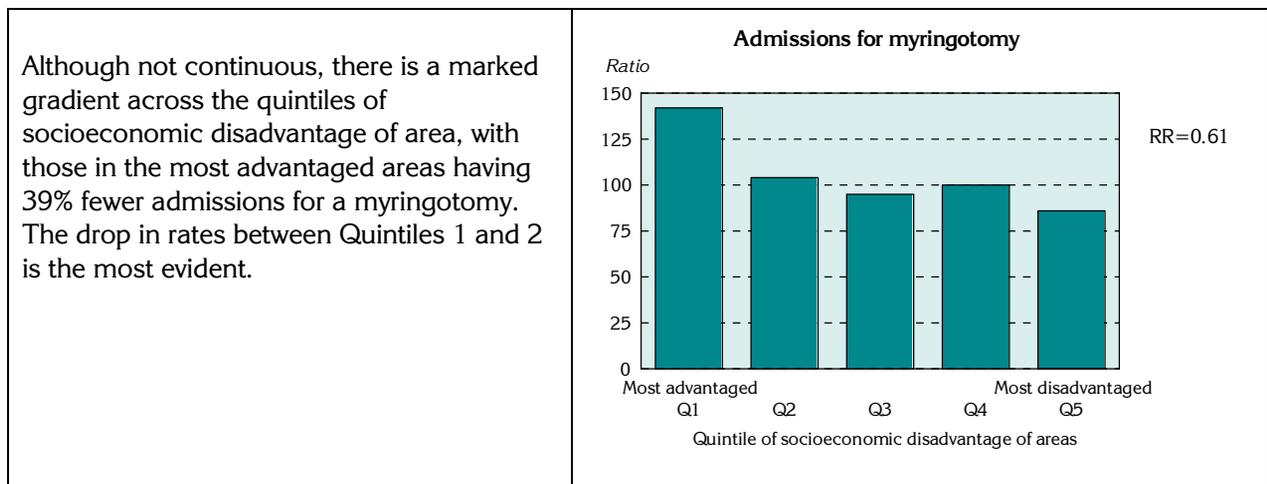
**A myringotomy (incision into the eardrum, or tympanic membrane) is usually performed to relieve pressure and allow for drainage of fluid in the middle ear. Ventilation is maintained by putting a small tube (or grommet) into the incision.**

The 1,434 admissions for myringotomy of children from Central Northern was slightly above the State average, a standardised admission ratio (SAR) of 103 (Table 95). A number of SLAs had highly elevated ratios: these were generally located in the outer north, as well as in a number of SLAs adjacent to the city, and to the east and south-east (Map 93).

Playford - Hills had nearly four times the expected number of admissions with an SAR of 382\*\*, but relatively small numbers, with 27 admissions. Other SLAs with highly elevated ratios included Adelaide Hills - Ranges (an SAR of 202\*\*, 38 admissions), Salisbury Balance (174\*, 27), Adelaide Hills - Central (169\*\*, 38), Burnside - South-West (148\*, 44), Unley - West (142\*, 37), Playford - West (137, 24), Tea Tree Gully - North (136\*\*, 85) and Walkerville (131, 13). Although not statistically significant, elevated ratios were also recorded in Tea Tree Gully - Hills (127, 28), Prospect (123, 41), Norwood Payneham and St Peters - East (116, 28), Tea Tree Gully - South (116, 66), Port Adelaide Enfield - East (115, 60), West Torrens - West (114, 49), Charles Sturt - Inner West (113, 45) and Burnside - North-East (111, 33).

Relatively large numbers of admissions for myringotomy were recorded in the SLAs of Salisbury - South-East (69 admissions, an SAR of 97), - Inner North (65, 101) and - Central (61, 106) and Tea Tree Gully - Central (56, 107).

Port Adelaide Enfield - Port had just over half the expected number of admissions for a myringotomy (an SAR of 53\*\*, 26 admissions). Other SLAs with low ratios included Charles Sturt - Coastal (57\*\*, 24), Playford - Elizabeth (68\*, 41), Charles Sturt - North-East (72, 35), West Torrens - East (75, 29), Salisbury - North-East (76, 34), Charles Sturt - Inner East (77, 28), Playford - East Central (77, 41) and - West Central (80, 30), Adelaide (85, 8), Port Adelaide Enfield - Coast (86, 44) and Campbelltown - West (89, 28).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 93: Admissions of children aged 0 to 9 years for a myringotomy, CNAHS, 2003/04

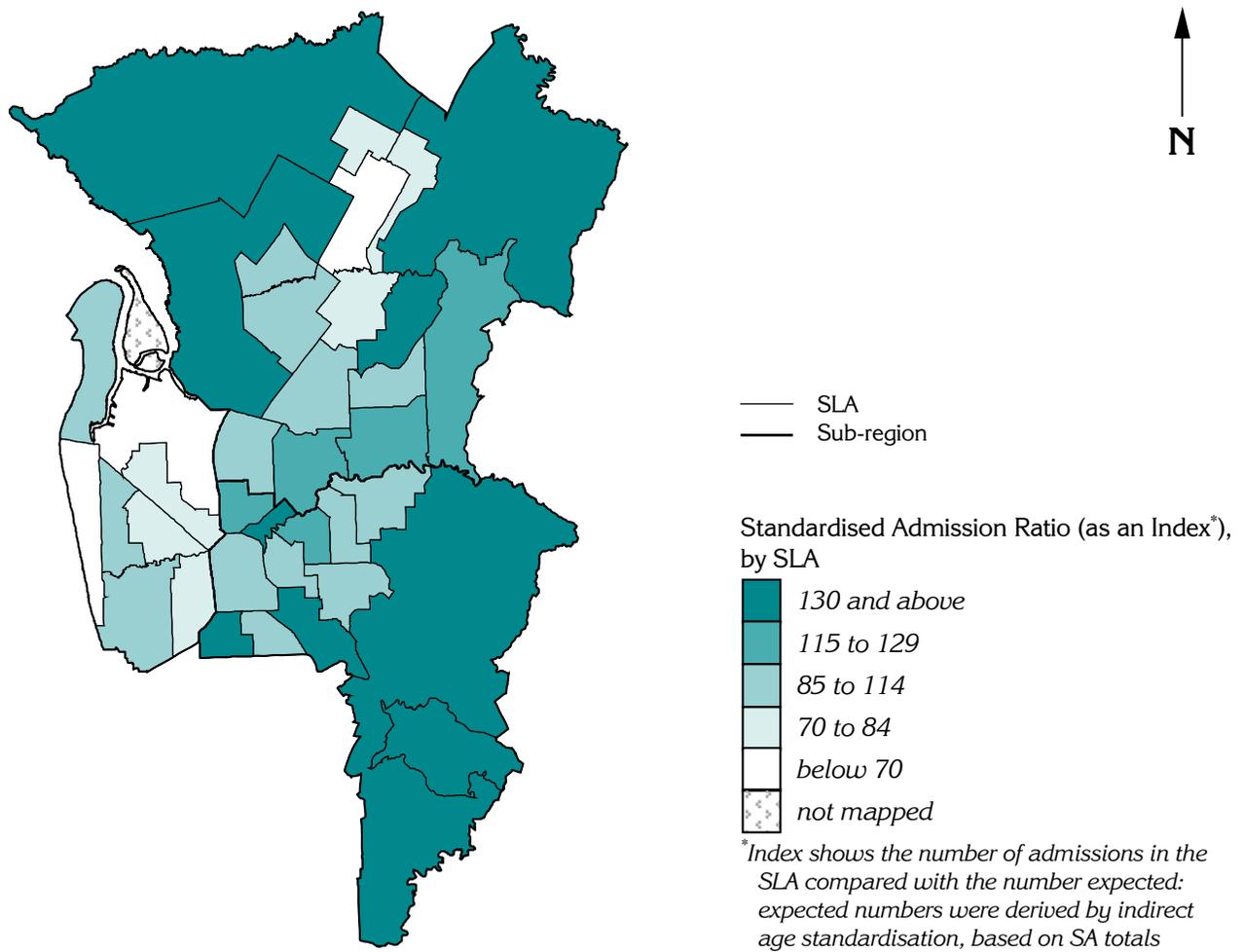


Table 95: Admissions of children aged 0 to 9 years for a myringotomy, CNAHS, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	313	142**
Quintile 2	256	104
Quintile 3	285	95
Quintile 4	260	100
Quintile 5: most disadvantaged areas	320	86**
<b>Rate ratio</b>	..	<b>0.61**</b>
<b>Northern</b>	<b>749</b>	<b>105</b>
<b>Western</b>	<b>280</b>	<b>80**</b>
<b>Central East</b>	<b>405</b>	<b>121**</b>
<b>CNAHS</b>	<b>1,434</b>	<b>103</b>
<b>Southern</b>	<b>659</b>	<b>112**</b>
<b>Metropolitan regions</b>	<b>2,093</b>	<b>106*</b>
<b>State total</b>	<b>2,854</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Hospital Admissions: Admissions for Caesarean section

Admission of females aged 15 to 44 years, living in the CNAHS, for a Caesarean section: data from 2003/04

## Overview

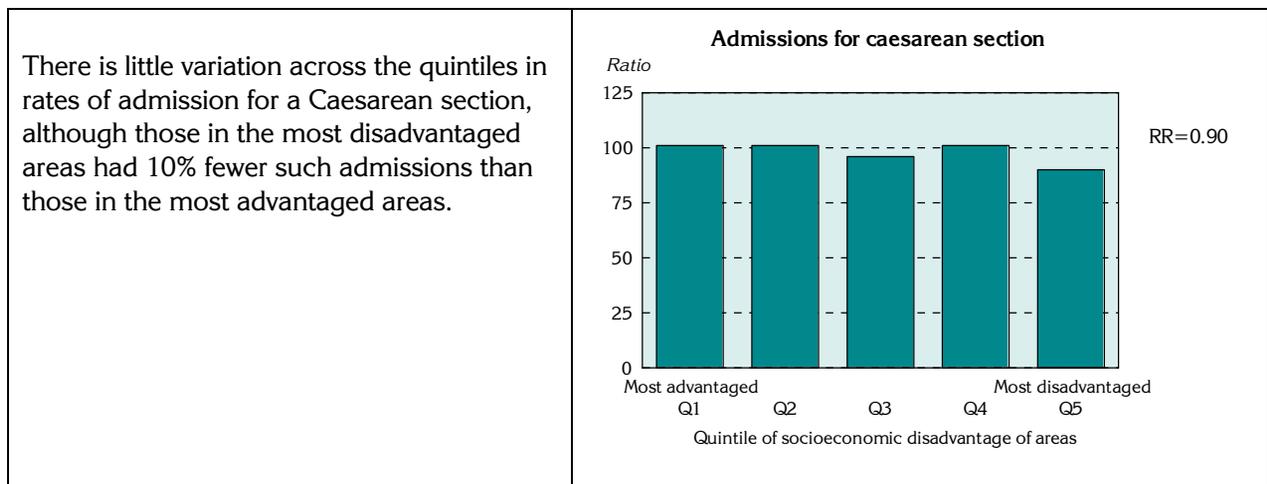
**A Caesarean section is a surgical procedure where an incision (a cut) is made through the abdomen and uterus to deliver the baby. A Caesarean section is usually performed when it is safer for the mother or the baby than a vaginal delivery or a vaginal delivery is not possible. In other cases, a woman may choose to have a Caesarean section rather than deliver her baby vaginally. Thus, some Caesarean sections are planned and some are performed as an emergency. Australia’s rate of Caesarean sections is high by international standards; and in South Australia in 2003, 30% of births were by Caesarean section, compared to 17% in 1981 <sup>87</sup>.**

There were fewer admissions for Caesarean section, than expected from the State rates, in Central Northern (a standardised admission ratio (SAR) of 97, 2,600 admissions) (Table 96). None of the ratios was highly elevated, with the highest ratios primarily in SLAs located to the south-east of the city and in the northern suburbs (Map 94).

SLAs with elevated ratios (none of which were statistically significant) included Tea Tree Gully - Central (an SAR of 112, 98 admissions), Salisbury - North-East (111, 77) and Adelaide Hills - Ranges (108, 42).

Relatively large numbers of women admitted for Caesarean section were recorded for the SLAs of Salisbury - South-East (126 admissions, an SAR of 97), Port Adelaide Enfield - East (122, 100), Tea Tree Gully - South (116, 96), Salisbury - Inner North (105, 105), Salisbury - Central (103, 99) and Tea Tree Gully - North (101, 98).

SLAs with fewer admissions than expected included Port Adelaide Enfield - Port (an SAR of 65\*\*, 58 admissions), Walkerville (80, 13), Norwood Payneham and St Peters - East (80, 44), Playford - Hills (80, 12), Charles Sturt - North-East (87, 99), Salisbury Balance (88, 42), Playford - West Central (88, 53) and - West (89, 26) and Port Adelaide Enfield - Inner (89, 73).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 94: Admissions of females aged 15 to 44 years for a Caesarean section, CNAHS, 2003/04

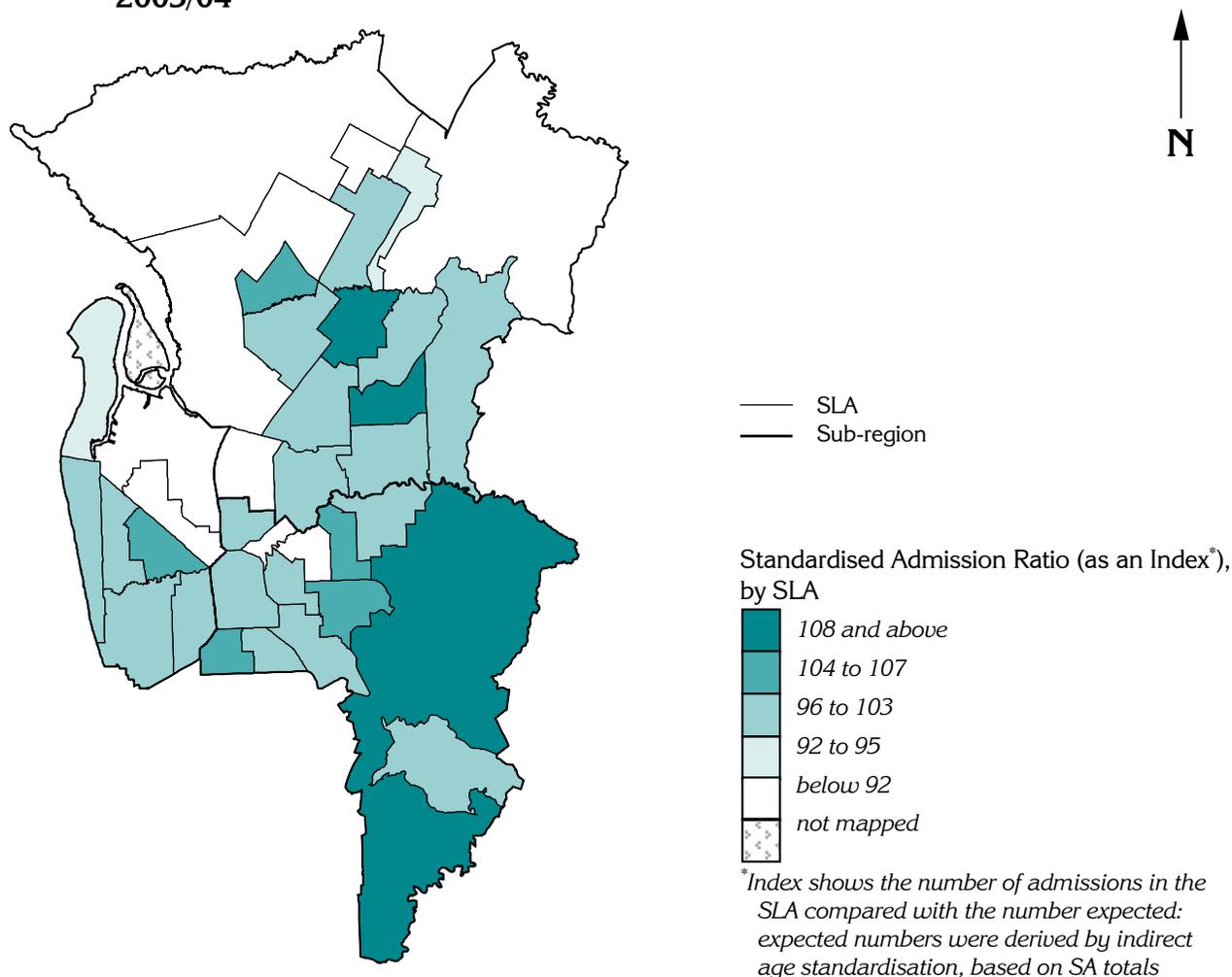


Table 96: Admissions of females aged 15 to 44 for a Caesarean section, CNAHS, 2003/04

Area	Number of admissions	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	467	101
Quintile 2	458	101
Quintile 3	547	96
Quintile 4	498	101
Quintile 5: most disadvantaged areas	630	90*
<b>Rate ratio</b>	..	<b>0.90</b>
<b>Northern</b>	<b>1,256</b>	<b>98</b>
<b>Western</b>	<b>630</b>	<b>92**</b>
<b>Central East</b>	<b>714</b>	<b>100</b>
<b>CNAHS</b>	<b>2,600</b>	<b>97</b>
<b>Southern</b>	<b>1,181</b>	<b>113**</b>
<b>Metropolitan regions</b>	<b>3,781</b>	<b>101</b>
<b>State total</b>	<b>5,167</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Hospital Admissions: Admissions for a hysterectomy

Admission of females aged 15 to 44 years, living in the CNAHS, for a hysterectomy: data from 2003/04

## Overview

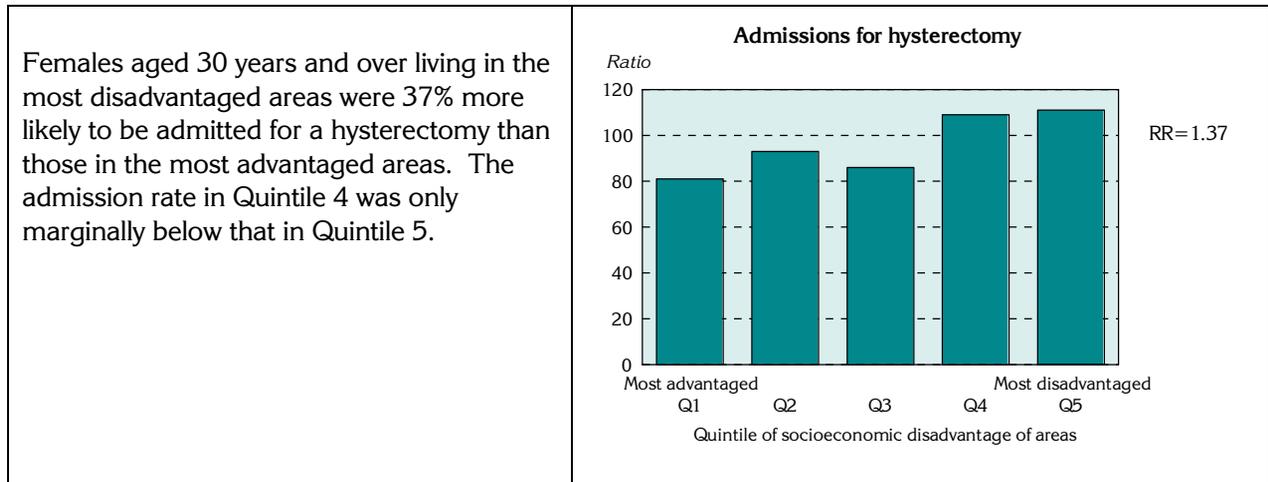
**A hysterectomy is a surgical procedure to remove a woman’s uterus (or womb) and the cervix. Hysterectomies may be performed through a vaginal (37%) or abdominal (45%) incision (cut) or using laparoscopic (keyhole) surgery (18%)<sup>88</sup>.**

The SAR was lower than expected in Central Northern, with five per cent fewer admissions (a standardised admission ratio (SAR) of 95, 1,337 admissions). The majority of the outer northern SLAs were elevated (Map 95). The northern sub-region had a much higher SAR (117<sup>\*\*</sup>) compared to the other subregions (87<sup>\*\*</sup> in western and 77<sup>\*\*</sup> in eastern) (Table 97).

Playford - Hills had over half the expected number of admissions for a hysterectomy (an SAR of 220<sup>\*</sup>, 13), Salisbury Balance (182<sup>\*</sup>, 18), Playford - West (152, 23), Salisbury - North-East (140<sup>\*</sup>, 56), Playford - Elizabeth (134<sup>\*</sup>, 56), Tea Tree Gully - Central (129, 65), Salisbury - Inner North (127, 52), Charles Sturt - Inner East (115, 44), Tea Tree Gully - South (111, 69) and Salisbury - South-East (110, 71).

Relatively large numbers of admissions for a hysterectomy were recorded for Port Adelaide Enfield - Coast (58 admissions, an SAR of 103), Tea Tree Gully - North (56, 105), Salisbury - Central (48, 99) and Campbelltown - East (48, 92).

A large number of SLAs in this region had fewer admissions for a hysterectomy than expected from the State rates. These included Prospect (51<sup>\*\*</sup>, 18), West Torrens - East (57<sup>\*\*</sup>, 23), Burnside - North-East (60<sup>\*\*</sup>, 26), Norwood Payneham and St Peters - East (61, 18), Playford - East Central (64<sup>\*</sup>, 21), Unley - East (65<sup>\*</sup>, 24), Adelaide Hills - Ranges (71, 15), Charles Sturt - Coastal (72<sup>\*</sup>, 45), Burnside - South-West (73, 31), Walkerville (74, 10), Norwood Payneham and St Peters - West (81, 26), Campbelltown - West (85, 30), Charles Sturt - Inner West (85, 39), West Torrens - West (86, 44), Port Adelaide Enfield - East (87, 45) and Adelaide Hills - Central (88, 24).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 95: Admissions of females aged 30 years and over for a hysterectomy, CNAHS, 2003/04

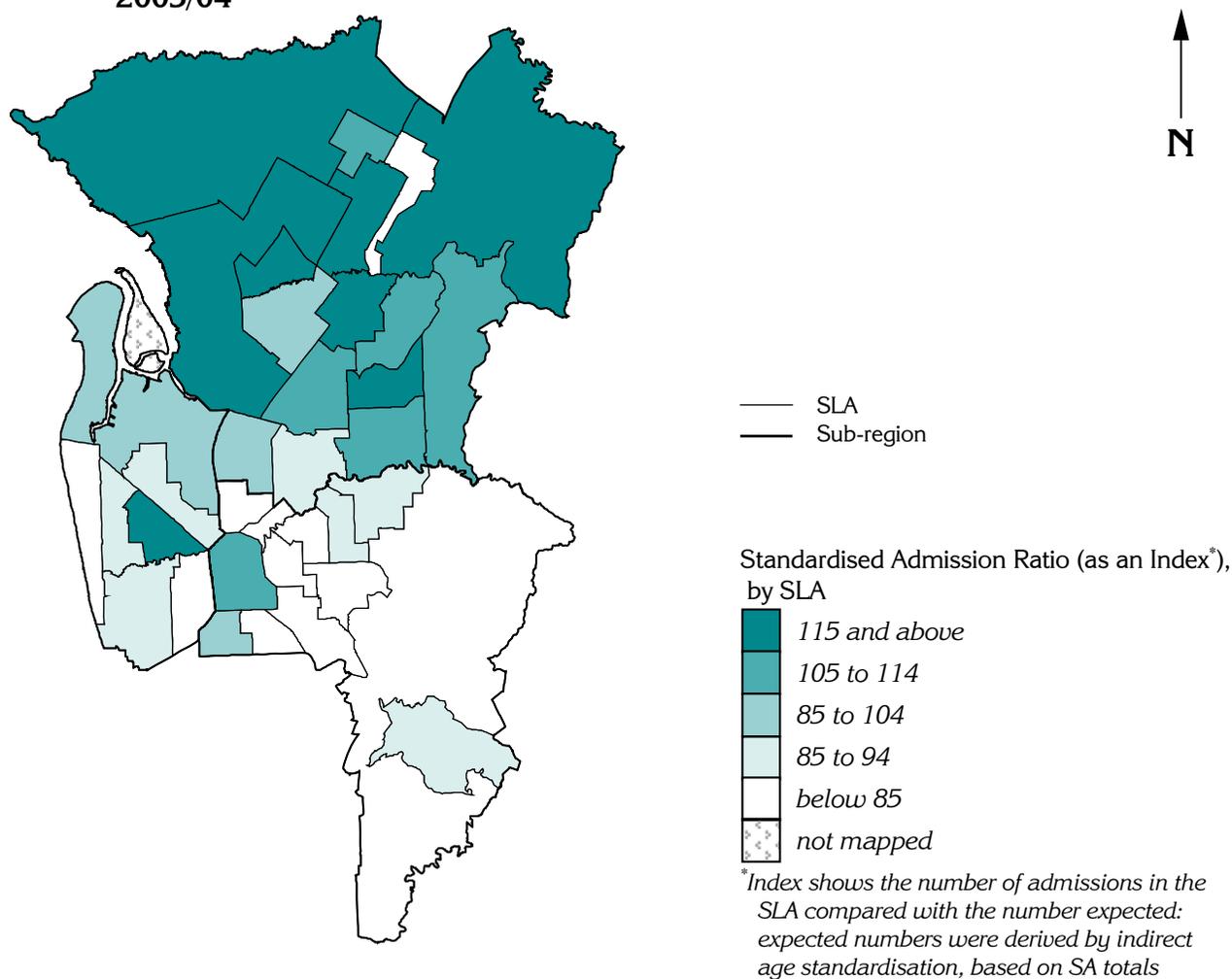


Table 97: Admissions of females aged 30 years and over for a hysterectomy, CNAHS, 2003/04

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	226	81**
Quintile 2	253	93
Quintile 3	263	86*
Quintile 4	278	109
Quintile 5: most disadvantaged areas	317	111
<b>Rate ratio</b>	<b>..</b>	<b>1.37**</b>
<b>Northern</b>	<b>673</b>	<b>113**</b>
<b>Western</b>	<b>342</b>	<b>88**</b>
<b>Central East</b>	<b>322</b>	<b>76**</b>
<b>CNAHS</b>	<b>1,337</b>	<b>95</b>
<b>Southern</b>	<b>648</b>	<b>104</b>
<b>Metropolitan regions</b>	<b>1,985</b>	<b>98</b>
<b>State total</b>	<b>2,795</b>	<b>100</b>

\* indicates statistical significance: see page 19

# Hospital booking lists: People waiting for more than six months

People from the CNAHS on a booking list for elective surgery at public acute hospital who have been waiting for more than six months, June 2004

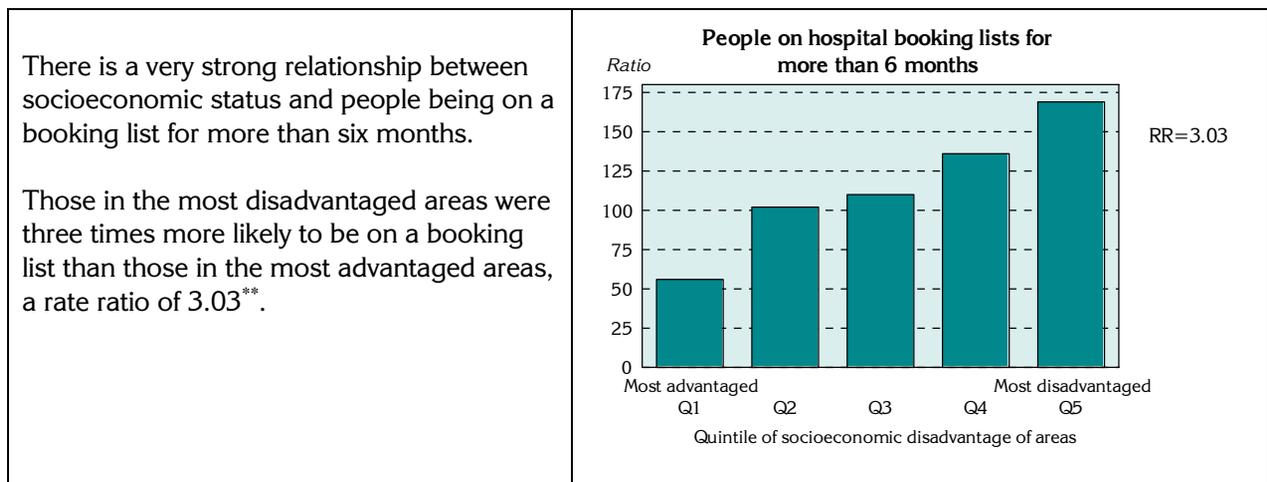
## Overview

**Each of the major metropolitan public acute hospitals maintains a list of people who have been assessed as needing elective (i.e. non-urgent) surgery: these lists are referred to as 'booking lists'. People requiring urgent treatment for life-threatening conditions are not placed on a booking list but are admitted for treatment. A small number of people may be on the booking list of more than one hospital.**

There were 2,060 residents of Central Northern who had been on a hospital booking list for more than six months: this was 15% more people than expected from the State rates (a standardised ratio (SR) of 115\*\*) (Table 98). The map (Map 96) and the correlation analysis shows there is a very strong association at the SLA level between being on a booking list for more than six months, and socioeconomic disadvantage. This is to be expected, as residents of some of the most disadvantaged SLAs also make the greatest use of public hospitals. However, the extent of their over-representation is greater than is indicated by their use of hospitals. For example, people in the Salisbury SLAs of - South-East and - Central were over-represented on a booking list (two thirds above the metropolitan average), compared with 16% and 15% above-average admission rates, respectively. In Playford - Elizabeth and - West Central, with 56% and 65% more admissions than the State average, there were also well above-average rates of people on a booking list, 67% and 58%, respectively.

Highly elevated ratios were recorded for people in the outer northern SLAs of Playford - Elizabeth (an SR195\*\*, 114 people), Salisbury - South-East (191\*\*, 153), Salisbury - Central (188\*\*, 113), Playford - West Central (184\*\*, 47), Playford - East Central (140\*, 56), Salisbury - Inner North (174\*\*, 86) and Salisbury Balance (131, 17), as well as in Tea Tree Gully - Central (132\*, 77). There were also highly elevated ratios in the north-west and western SLAs of Port Adelaide Enfield - Port (an SR of 168\*\*, 103 people), - Inner (151\*\*, 72), - East (138\*\*, 97) and - Coast (131\*, 88); and in Charles Sturt - North-East (140\*\*, 85).

The lowest ratios were recorded for people in Adelaide Hills - Central (an SR of 35\*\*, ten people), Burnside - North-East (40\*\*, 21), Burnside - South-West (42\*\*, 21), Unley - East (42\*\*, 20), Adelaide Hills - Ranges (50\*, 11), Walkerville (56, 10) and Norwood Payneham and St Peters - West (67\*, 28).



Note: In the chart, Q1 to Q5 are groupings of areas (quintiles), where Q1 represents the most socioeconomically advantaged 20% of the population and Q5 represents the most socioeconomically disadvantaged 20%.

Map 96: Hospital booking lists: People waiting for more than six months, CNAHS, 30 June, 2004

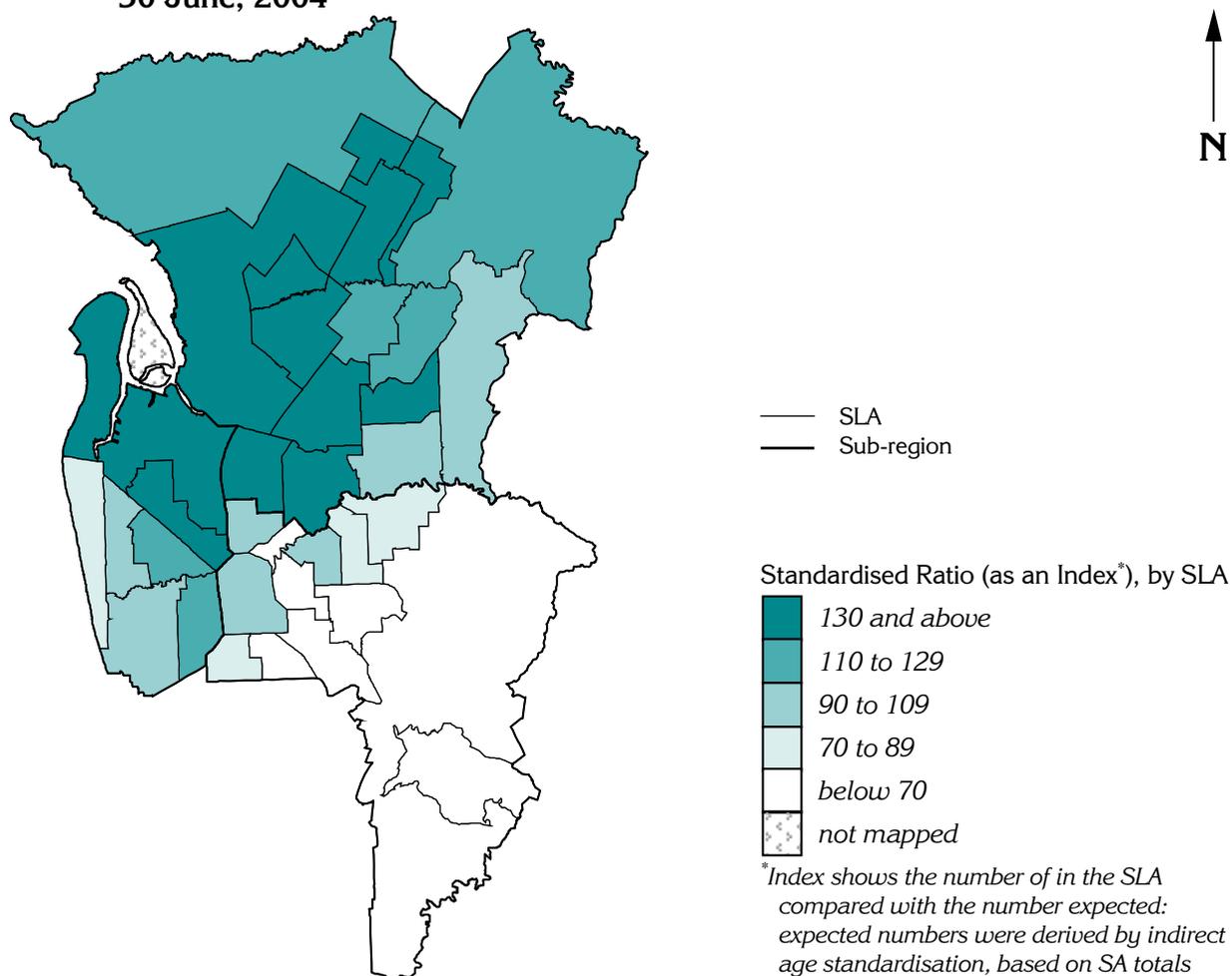


Table 98: Hospital booking lists: People waiting for more than six months, CNAHS, 30 June, 2004

Area	Number	Standardised ratio
<b>CNAHS</b>		
Quintile 1: most advantaged areas	187	56**
Quintile 2	341	102
Quintile 3	444	110
Quintile 4	451	136
Quintile 5: most disadvantaged areas	637	169**
<b>Rate ratio</b>	<b>..</b>	<b>3.03**</b>
<b>Northern</b>	<b>1,097</b>	<b>148**</b>
<b>Western</b>	<b>604</b>	<b>118**</b>
<b>Central East</b>	<b>359</b>	<b>67**</b>
<b>CNAHS</b>	<b>2,060</b>	<b>115**</b>
<b>Southern</b>	<b>963</b>	<b>127**</b>
<b>Metropolitan regions</b>	<b>3,055</b>	<b>118**</b>
<b>State total</b>	<b>3,519</b>	<b>100</b>

\* indicates statistical significance: see page 19